

HOME COMPUTING WEEKLY

AN AFRON SPECIALTY PUBLICATION



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will tell you lots more programs in
connection as you can see
them as you will.

PLUS PLUS PLUS

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on the market.

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copy, place a regular order with
your newsagent.

Premium Bond

DETROIT, MICHIGAN — 1985
represents the new exclusive
James Bond game from
Domark.

Mark Thompson, a Domark
designer, would only say the



game will follow the James
Bond's. There will be four full
adult games and each will be
based on one of the novels in the
film.

Domark's first game,
"Bond," will be in a price of
\$29.95 for the first person to
order it. Mark noted that "we
will continue to provide bonds
for people to play, but the point is
that we wouldn't repeat
it's," he said.

Fore!

David L. Thompson
and Paul Stevens
have completed their
last issue of the monthly
magazine, "Fore!", which
was originally published by
David L. Thompson.

The two, follow the progress
of a pair ball from a rural scene
and a few on-line bulletin
boards described the software.
The disk was programmed by
Paul Stevens and David L. Thompson
and Paul also wrote the
Software column that was
highlighted over 6 issues of the
last issue.



Enterprise
review —
the final
frontier?

Amstrad
disc drive
Review

Gallup char!
The one to
believe in



Meet George
New cartoon
strip

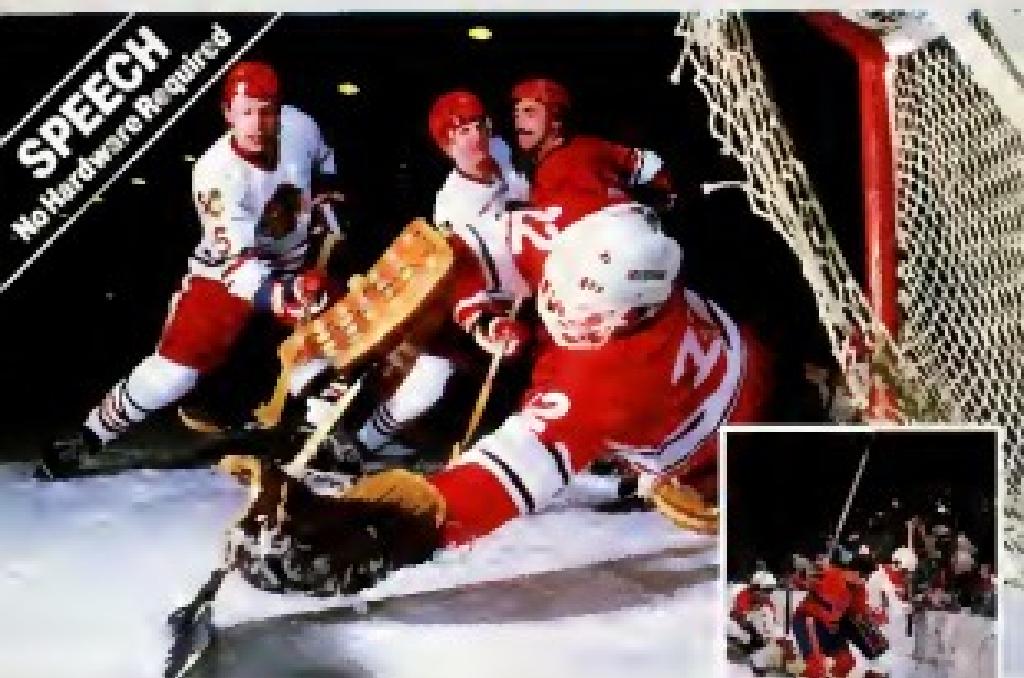
First review
Dragonfire
from Hawson

FAST AND FURIOUS

SLAP SHOT

ANIROG

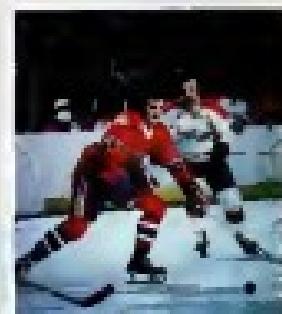
SPEECH
No elsewhere required



ALL ACTION ICE HOCKEY

SLAPSHOT from Anirog is a two player fast action, ice hockey program. Also in this thrilling game there is included a smoothly running speech synthesis system of the very highest quality. Before the actual game starts each player must select an international hockey team to represent. After doing this you must quickly and skilfully manoeuvre your man across the glistening ice whilst your other team, or else move automatically around the rink waiting for you to pass the puck to them. If you do manage to pass past the opposing defence then you have a chance to shoot for goal and score. However, you still have the gender to beat who is able to dive in all directions. Also included in this amazingly quick and totally original game is the ability to actually physically bodyslam your opponents. Never the less, do not be too aggressive otherwise you could incur a "roughing penalty", resulting in a foulout in your own end, giving the opposing side an easy chance of scoring. Also other extra features available include Pause mode, and three levels of play ranging from fast to slow as well as a restart option. Slapshot from Anirog is a totally original two player game with lightning fast action never seen before on the Commodore 64.

Two J.S. Commodore 64 Cassette £8.95 Disk £10.95



HOME COMPUTING WEEKLY

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SOAPBOX

In the eye of the computer game expert?

As I go around and see the software houses' new products and might be forgive for believing that there is no real or serious concern becoming apparent.

One thing is certain: There will be far fewer new games this year than there were in last year's bumper crop. A number of houses are planning to release three games over the year rather than, in larger numbers, some six or seven offerings of software per year. Five games instead of five per year.

Within this narrowing the decline of the game industry I believe that there is a gap of 10% in quality and development. Fewer than ten percent consumers, relatives, dealers, of adults and their only purchase being from them.

With the trend towards games linked to other products it looks as if 1983 is going to be the year of the TV game. There are large numbers of such games being planned at this very moment and it will prove to be controversial. For you to see controversy from the latest high-profile strategy game, the latest short and snappy rock albums. There

If you disagree with anything we say from this soapbox, write us in. We give a prize for all the letters we get, so let us have your thoughts and ideas.

BASIC LIVING



by Jon Wedge and Jim Barker



SPECIAL OFFER

HALF PRICE GAMES

By special arrangement with Alligator, one of Britain's leading independent software houses, we are able to offer you half price software.

Using the voucher below you can order any game from Alligator's catalogue at 50 per cent discount post free.

Computerise It!, Spectrum, Amstrad CPC/664, BBC, and Electron - software for all these machines can be yours at a bargain price.

Postage charges include £1.00 for the Amstrad and Hypercard for the CPC.

Deluxe car Disc is a limited version of the incredible, popular strategy game, complete with under-sea, space, mines, warships, robots and the now-famous alien invasion which caused so much problems. Amazing colours are used to their full effect and you won't believe the mind-blowing sounds. Normally £19.95, if you use our special voucher this program will cost you less than £10.

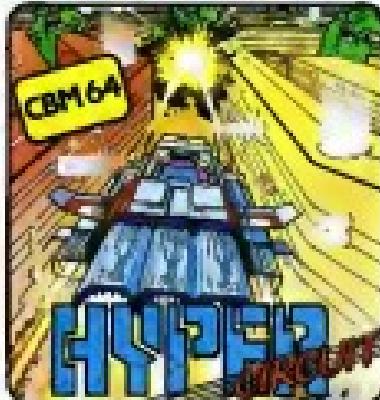
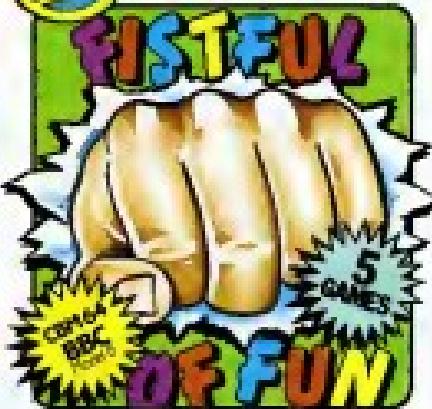
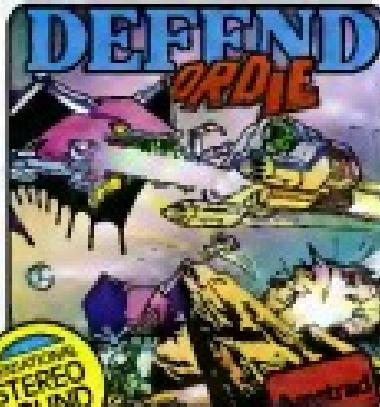
Hyperspace gives you the chance to travel round your computer's virtual circuit board extracting the sensitive micro-processors from evil microcosm. You travel the waves, suggestion ready to deal with all the crazy inhabitants of the miniature world in a non-stop action - all yours for less than £4.

Alligator was the first company to sell compilation versions of its own best-selling programs at a sensible price. A Festival of Fun, now for BBC and CPC, adds to its popular Charisma series. The BBC fetal games, Tazoo, and Bugzoo - both high selling original games - and two brand new titles, 3D Space Rider and Glowing Plant Mania. Clockwise featuring a high technology experience, makes up the final duo in the list.

The CD tape also packs in two games, Look See of Alligator and Crackdown - brand new titles - and two adventures, Aster Tomb Revisited and Blistered Planet. These tapes originally sold for nearly £8 each, but on this compilation tape they are just £9.95 in shop price and by using our voucher you save a further £3. Both compilation recordings available on cassette at a mere £11.95 - £5.00 using our voucher.

This is a extremely offer which starts this Saturday May 16th 1987. Only the voucher can buy HCW software packages can be supplied. If you would like a copy of Alligator's full catalogue with details of all Alligator products please send a large stamped addressed envelope to the address address and we will be pleased to give.

NAME	
ADDRESS	
TELEPHONE NUMBER (if any)	
TOTAL	





At last, details are emerging of the problems that have caused Acorn to start reorganising on the basis of ownership.

Over production and high stocks appear to have been the major problem, and this has caused Acorn to make a loss of nearly £11 million over the last six months.

In order to beat the company out of these difficulties, there is to be a major issue of shares. All those people who already own shares can buy more now at a special price.

This will raise about £12 million so that the company can carry on trading. Since Haworth, Hauser and Coss Carry hold 85.7 per cent of the shares, they are eligible to buy the bulk of the new ones. Earlier this month they have agreed to sell all their share and a few of

Company get together

Marketing rights for the new version of software produced by Neil Byre have been given to Quicksilver.

Country to region, in the press, this is not part of a take over bid, simply a move that makes the most of the expertise of both companies.

The titles haven't all been announced, but one thought to include Big Bird's Egg, the first in progress Amstrad and also Tarzan, both intended for release very soon.

The companies have had a long association in the past, and have been joint hosts of the annual Quicksilver dinner. This is an occasion when people in the computer industry, job centres and press gather together to eat, eat, eat.

Neil Byre, managing director of Quicksilver, and 'One of Quicksilver's focuses in the future will be to act as a provider of third party software. The association between Quicksilver and Neil Byre over legal other areas of manufacture is a later stage.'

Quicksilver, Polesden Park Rd, 11 Polesden Rd, Southgate, N19 4LL.

Acorn sprouts again

Next morning comes to Quicksilver. This Quicksilver will have 20.1 per cent of the shares and therefore take control of the company.

As part of these changes the new chairman of Acorn is to be Sir Alexander Reid, who joined the board some nine ago and has overseen the change of ownership and the financial reorganisation.

In the future Acorn Computer Limited will be split into four divisions. These will reflect its main markets, education and training, scientific and industrial, business, and consumer. This is expected to reduce the company's overheads and will mean that a further 80 people will be made redundant in addition to the 39 redundancies already announced.

Only time will tell if these

changes will make Acorn a viable concern again. The advantage of the new connection with Olivetti is its extensive marketing expertise (Olivetti) announced. 'We particularly liked the proposal from Olivetti because it adds a valuable international dimension to our activities and because we are not afraid to believe in our products and them.'

The reason with overseas markets is due to the company's previous attempts to break into the American educational market, which ended in disaster, a cutting back of the sale of the Acorn 4000 and losses of over £2 million.

Acorn Computer, Polesden Rd, Chertsey, Surrey.

Elementary Dr Watson

Elementary has met its match. Jonathan Paul and David Cunningham have become the first people to solve a Sherlock Holmes mystery before the man himself.

The mystery was in the form of an adventure game from Millbrook House and it took them 18 months to work their way through the intricate plot.

David commented: 'We thought that the puzzle was tedious, but Sherlock is even more of a challenge and really does require a lot of work.'

To mark their achievement David and Paul were invited down to London from their home in Moseley, Birmingham, and were treated to lunch at the Sherlock Holmes restaurant, where an impressive framed reproduction of the famous Holmes portrait hangs.

The photographs show them in the wash and dress their costume for Holmes' appearance less than dressed unless you really are a Holmes fan or his host.

Sherlock Holmes, Castle Hotel, Liverpool. Tel 01 507 0777.



Sherlock Holmes

BY GEORGE! COMPETITION

10 obedient little robots are on offer this week. If you need a friend George could keep you company

George, the programmable computer robot, is a versatile little creature. He stands 16.5 cm tall and is styled in grey, red and blue.

If you think the awards have a nice person to have received, then send on, because at this week's competition we're giving away £10 off. There are other rewards which will interest us.

"Georgia is made by CGA, and is just one product from a wide range of high technology tools and games. CGA claims that Georgia is not only a toy, but also an educational tool. Dennis Morris, CGA's marketing director, said: 'The toy will be teaching children to program while they are playing a game with it'."

George is a multi-talented soul. He can go forward, backwards, hold, turn right, turn left, move left and right, and even reverse his steps. He also has three selectable power and nine time intervals. Any action can be programmed step by step and each can be repeated up to nine times. He

also wears a light blouse and makes a sobre-like round George even has a demo progress so he can show off all his skills.

is a warning that, *today*, classes that Chicago provides are the fundamental feature of an expensive teaching system. He has an *in-built* microprocessor, a speaker and a small keyboard on the top of his head. The control panel has 25 logic keys according to CGL, it is extremely simple to use and can be taught to children and novices and experts. Dual motors take care of rotation and steering from the rubber tyred wheels and a built-in speaker provides beeps, buzzes and light effects.

So will College you want to study the two short programs printed on this page. Don't worry if you're no good at programming. All you need to do is count the number of differences between the two programs — as you would in a normal spot the difference competition. If you like, you can run the programs. It will work on most computers in

system as very simple fields.

How to order
Study the two programs — there are a number of differences between them. Decide which differences are important. If you want one copy and not two, change your program as suggested. When the number of differences depends on the kind of envelope, Program A is the version that will cost if you type it in.

Post your entries to George Con-
gratulations, Home Composting
Workshop, No. 1, Design Street,
London W1R 3AB. Entries must
arrive by the 1st June 1984.

The most common mistake made by individuals who wish to start their own self-employed enterprises is to set up a shop and market it as a separate business. **Important:** please take care about the problem of marketing your products and services with the strategies on the basis chosen for consideration. If you are not sure, the expert will be ready to advise you to avoid your point; no place

Non-English
Names will not be accepted from
members of Aboriginal tribes,
Native American Council and
Alaska Native & Aleut. The
restriction also applies to members
of the Canadian First Nations.
The name of their spouse does not
part of the name.

ANSWER

These will not be accepted from members of Army National Guards, U.S. Marine Corps, U.S. Coast Guard and Alabama Personnel & Firemen. The restrictions also apply to uninvited guests and dependents of the companies.

180070 1800
JULY 8
(Interstate Competing weekly
SUNDAY 8 A.M. TO 10
AUGUST 12 1991-1992-V
SUBJECT 3
LEVEL 3 A M 100 100
TOPIC 100 100 100 100
SUBJECT 3
LEVEL 10 A.M. TO 10
SUBJECT 100 100 100 100
SUBJECT V

120MHz AT&T
800L6
2048x16 Home Computing Boardchip
Serial 1 - 8 16 16
PCILET AT&T/AT&T-1
Serial 2 - 8
Serial 3 - 8 16 16
Parallel 1 - 16 16 16
Serial 4 - 8
Parallel 2 - 8 16 16
Keyboard - 16x16x16x16x16
1100MHz 2



George Competition

Name _____
Address _____

—
—
—

Post note

Member of African American Journal
and writing on topics such as education, politics, and social issues. The journal is published quarterly and is available online at www.africanamericanjournal.org.

Miles Long
Rush

Waco Lure, LLC The company programs will feature laser discs designed to increase the visual impact on Friday March 25.

The system of recording songs onto the discs, which can then be read by a laser, has applications in publishing, education and leisure. The programme will also have the technology as applied to a commercial picture library.

There is the possibility that a new Philip Morris will make Philip Dreyfus chairman, but that is likely to be some time in development. One project, already underway at the firm's own Dreyfus Project, which will employ over 100,000 schools comprising a new version of the *Univocalic Book* for the 50th anniversary of the original.

The book will be based on
over thirty carefully kept
photographs, which will introduce
to a like company and allow
you to follow him up at any time
no comments and photographs
of the people living there in
fact.

Other themes of Micro-Link will include issues of portable computers and spreadsheet software, free publishing, the Internet, computer ergonomics and better public health.

There will also be a review of The Learning Plan, a new series about the educational aspects of citizenship. This will examine the effects of the government's scheme to put a focus on every school.

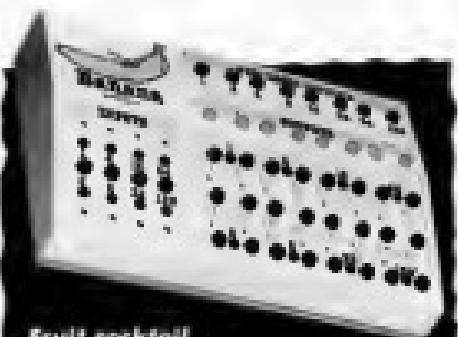
Mark Low, Box 877, Palos
Heights, Illinois 60463. London
01-739-2924

SuperGreen
dinner in

A surprise visitor to the house last night was Super-Gene, star of the successful TV soap.

Tynanoff has invented a breeding procedure with Tyne-
ton Techniques to produce a
strain based on the character
he desires of the game he
envisions you, one of the most
desirable woods as well as Tynanoff's
other above in her Southern home
state, success should follow.

Through, Addison Paul, Mrs.
Beverly-Wood Winet, Tyne &
Wear No. 77-321



Brazil, north east

The following is a summary of the main findings of the present study. The results are discussed in the light of the previous literature.

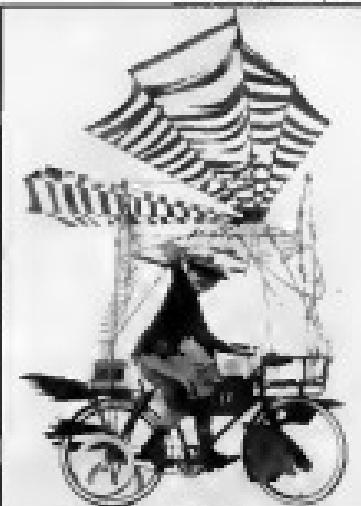
Philippe, son père, a été nommé à la tête de la Mission d'assistance et de conseil en matière de sécurité dans les îles du golfe de Guinée.

the movement and growth of the
newly-arrived. These
immigrants are often in difficulties

while she may begin to feel
tired and weary by now.
A second factor is the
intensity of the marital conflict.
The more intense the conflict,
the more the wife's mood fluctuates
and the greater her tendency
to withdraw from her husband.
The third factor is the wife's
ability to tolerate the marital
conflict. Women are more
likely to withdraw from their
husbands than men when
they feel that they can no longer
tolerate the conflict.

Franklin Manufacturing Company
Canton, Ohio 44701, U.S.A.

**It is a Black
Pigeon Story**



BACK TO BASICS

Colin Wilton-Davies

Introduces you to Spectrum BASIC with his idiot-proof guide. It's easy to follow and gives you an insight on how your machine works.

First of a regular series

The screen does its all around you, the cursor is yours, and the program is also. Take from you, always, as the cursor ready to type. The arrows look suspiciously yellow, the keys red, and the movement of moving them has been like this. When you reach the stage, you should begin thinking about writing your own programs. Whether you want to write games or something useful, this series is for those of you who haven't given up, but with the manual was a bit daunted.

You'll know by now a bit about the Spectrum keyboard, like using the CAPS-LOCK and SYMBOL SHIFT keys, and just pressing the A key instead of cycling in LOAD. Now see what happens if you press the P key, several of the word LOAD which you get from the J key, the word FAINT appears in the bottom of the screen. This is a good place to start learning to program the Spectrum, so make what clever things are going on inside the machine, you won't know it doesn't tell you. And the PRINT statement is a very valuable tool for getting out information.

If you now press the ENTER key, the Spectrum gives you an "OK" message and some numbers, what you've done is put it in PRINT notation, or it did exactly that and then said "OK" meaning "That was done as you said, what next?". Computers are like that, very simple minded. You don't have to be elbow to write programs, you really have to get down to a very simple level and break everything down into tiny steps. Computers are, however, quite good at arithmetic, and you can use them like calculators

Press the ENTER key again, then the P, then 0, then 29 (as is my shorthand for SYMBOL SHIFT and V keys pressed together), then ? . You should agree, by pressing the message "PRINT 0?" from the PRINT key, and the Spectrum displays "0?PRINT" at the top of the screen, it has decided 0 by 1 and given me the result faster than thought.

This was a short series of instructions carried out, but not a program, if you want the result again, you have to give the same instructions again. To make it into a program, you must give "LINE NUMBERS" before each small group of instructions. So press 1, then 0, then 0 (these are spaces, then P, then 0, then 29 then ?, then ENTER). This should look like

100 PRINT ?

which is a very short program. It is stored in memory, but hasn't done anything because you haven't told it to. And computers were stupid, didn't I?

To get the answer, you have to RUN the program, which you do by pressing R (use the word RUN) and ENTER. Same answer as before, and an OK message. RUN it again and again, and the same answer comes up without you having to repeat the instructions. This is the essence of a program, it is a stored list of instructions.

Not much use to the though, and not very appealing. Let's suppose it. Have you noticed the "0" sign after the line number? It's a pointer to the "current" line, and if you press C (CAPS SHIFT and H, a copy of that line appears at the

bottom of the screen. By EDITING, that has a Fading K in "K status" to mark next place in the line. You can move the cursor left or right by pressing L or C (Ctrl-left, then press L or C Ctrl-right), then press I and ENTER. Now you have a two-line program

100 PRINT ?
100 PRINT ?

Rather than RUN this (I'm sure you'll notice the result), press C1 space and enter the command Right (C1) two places, move the V by pressing C0, then type "11" (without quotes) and ENTER. Your program now reads

100 PRINT ?
100 PRINT ?

and if you RUN it, you get

1 295140
1351438

The Spectrum has evaluated your mathematical expression, in the same order as the line numbers. This is a general property of BASIC programs. Now, BASIC allows, although "1000" and "11" are "10", lengthening the program to

100 PRINT ?
1000 PRINT ?
1000 PRINT ?

with your eyes has inserted in the proper place for us, remember. You can see the point of not using consecutive line numbers. If you leave gaps, you can insert your "abbreviations". You can also press C7 or C8 to rekey the current line position up or down to EDIT other lines, or you can write new lines with numbers. If you just type a line number



and ENTER, this has the effect of moving the whole line. Now LEFTing each line to change all the 'A's to 'B's (BBS). The 'B' is the 'operator' for multiplying, just as 'C' is the operator for division. In this way, you could write a program to print out your seven digit table for your 1000 names added on the screen, but don't!

There's a better way to do that, using a method of iteration. On top of your program, the quick way is to press A and ENTER — the BBC BASIC interpreter tells the Spectrum that you want to write a new program. Almost like English, really. The screen changes, then clears to the usual copyright message.

Before using the control cursor, I must mention the size of variables. These are the letter names in a case, the names referring to the position of the cursor. Variable names are the names of memory addresses with numbers at their

endings. We are going to call a variable 'V', because we are going to count with it, and in this case the Spectrum won't let us use a longer name. The system goes to call the line of memory at a FOR NEXT loop, and we are going to count from 1 to 12. Type A0A, then FUC, 1,12, without commas, and you should get:

100 FOR z=1 TO 12

in a smaller way, enter

100 PRINT z

100 NEXT z

and when RUN, you will see the numbers in the seven times table on the screen. The FOR loop

sets up the starting and finishing lines for 'z', the second line calculates and prints the answer, the NEXT statement adds 1 to the value of 'z' and checks to see if this has exceeded the max limit. If it hasn't, the Spectrum repeats the calculation with the new value of 'z'. When 'z' does go over the limit, execution passes to the line following the NEXT statement. There isn't one, so everything stops.

For a blank cassette or tape recorder, record Forward 1 to 10, then play the tape. Now press SHIFT & V (VOL), then hold the MIC socket on the Spectrum to the MIC on the

recorder, disconnect the PAR lead, press RECORD and the ENTER key on the Spectrum. This will SAVE later — your program is now recorded on cassette. Record, disconnect the PAR lead, press VOLUME (PAR is shorthand for CAPS SHIFT and SYMBOL SHIFT together) (Volume +). Then complete the program just saved on tape with the previous in memory, if you don't get an OK message, SAVE again with a different volume setting until you do. We'll make the program more versatile next time.



ADVENTURELAND by Alan C. Morris, written and designed by Alan C. Morris. Price £19.95. From Electronic Games, 100 London Road, London SW18 4JL. Tel: 0181 644 0000.



SPACE INVADERS by Alan C. Morris. Price £19.95. From Electronic Games, 100 London Road, London SW18 4JL. Tel: 0181 644 0000.



SNOUT by Alan C. Morris. Price £19.95. From Electronic Games, 100 London Road, London SW18 4JL. Tel: 0181 644 0000.



SPACE INVADERS by Alan C. Morris. Price £19.95. From Electronic Games, 100 London Road, London SW18 4JL. Tel: 0181 644 0000.



QUAKE by id Software. Price £19.95. From Electronic Games, 100 London Road, London SW18 4JL. Tel: 0181 644 0000.



Playware and video news

TI-99/4A

We have lots of exciting games, from 100+ in BASIC mode for a range of 100 games, to 100+ in ZE mode for a range of 100 games. **ZEAD GOLF** (Golf) is a very popular game, in Colour 11 (ZE mode) featuring colour enhanced, highly detailed graphics.

SCARFACE (Action) is a fast action game based on the movie Scarface, featuring lots of violence and gore.

ROCKY HORROR (Action) is a fast action game based on the movie Rocky Horror Picture Show.

For more information contact: **INTERSOFT**, 100 London Road, London SW18 4JL. Tel: 0181 644 0000.

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SOFTWARE



Dragonfire

During the Shogunate, Iku used the crown of Yamato no Kuni and is out to find the other four. That is how the game starts for Dragonfire, the sequel to the Sierra's Christian best-seller, Avalon.

A Torque is an ancient relic which consists of many strands twisted together forming a band which is decorated and worn around the neck as a status symbol. The Dragonfire was an ancient magical symbol, possessed of which guaranteed rule of all the British Isles.

We are told in a poem that the Dragonfire was hidden away and only the owners of the Five Kingdoms Britain in order that the Torque's power could be known. All, with will and might of the North caused Death of the High King, Vortigern, and while he lay in the first part of the Torque. At that same hour, Merlin, son of Avalon, entered the castle, called by the rest of Merlin he is entrusted with the defense of the realm and the task of rescuing Merlin from Merlin.

The game is developed to an adventure manner. You have control of Merlin and can move him through the many locations of the game by using a joystick. The screen scrolls were smoothly left and right, but there was also movement up and down movement in which case the screen is changed instantly. The graphics use of a very high quality and the screen is very balanced with a deserved border as display permanently around it.

At the bottom of the screen is the picture of a scroll which contains all the spells that Merlin knows, these may be selected by scrolling the scroll which will be done by using the joystick and pressing fire when the correct spell is in a specific highlighted colour. When a spell

is selected you hear again sound music by yourself, so that he may set the correct scroll. As the game progresses Merlin uses parts of magical items that will give him another spell, if that happens the spell is added to the scroll.

Another main feature of Dragonfire is "Memory Activation" which is when Merlin has called their unique form of creature interaction. That is to say each creature that Merlin meets in the game has an attitude towards him, say, hate, like, distrust, etc., but this is not fixed and changes. Depending upon Merlin's actions. These梅林 uses up all the creatures in the game if he is too scared in his situation.



You are able to use the game at any stage which is useful as it will take many hours of hard work to solve Dragon Quest and then run from the lastest Dragonfire on the stated Lord Land.

In conclusion I must say that if you like the sort of game then Dragonfire is for you, however this game does take a lot of getting used to and I wouldn't recommend it to a beginner.

PAUL

Publisher: Heresy Computer

Address: Heresy Inc., 388 Milton Trading Estate, Milton, Aylesbury, Bucks HP21 4BX.



Accelerator

This is a great game in a great price. I mean come on a weekend for about £15.00 then comes along, though I've said to myself this is coming out of my savings... and I thought they were reasonable! Ed - that this is super!

A multi-reversed heading screen changes to several cars racing in the background, whilst you have the option to select Accelerator II controls, new instructions, bonuses or points table, then an info screen. You control your ship in all four directions. Moving at you are taking care to avoid space mines. Your target is a wide variety of alien ships, such as mines. The more mines you blow down, the thicker they become, and the more points they're worth, 20 points a kill.

When you fly out from the engine power and quality of the graphics. The screens are large, flicker-free, and move with great smoothness. The sound is good as you'll hear from the speakers, and accompaniment explosions and tape on the screen. As each successive wave increases to your blaster, the screen which you end in a new begins.

Near the last areas of all it's only £1.99! This is as good as games few times the price, the Spectrum budget is seriously taken on its back. What more can you ask? Why doesn't other software follow up the same idea? Buy this today for your collection if it is the sort of game you like. You won't be disappointed with it. D.M.

Price £1.99

Publisher: Computer City

Address: 99 High St, Dudley, W Midlands DY1 1QF.





Desk Diary CD4

Desk Diary claims to be a powerful Diary Information Management System. In essence you use several diary sources by date, you can maintain separate pages of dates such as names and addresses, and you can search the information base for the occurrence of any name or address; you can import or export files between Desk Diary and Diary File, Easy Script and Easy Calc.

It sounds good, but naturally there are reservations and your attitude to this piece of software will depend on how dedicated you are to stores. In other words I might think a traditional handwritten diary is superior.

Your diary is maintained on a separate data disk. The year is divided into pre-determined quarters, i.e. Quarter 1 is always for January to 31st March, and you can open your data disk for the current quarter. Desk Diary allows you to make entries on up to 30 future appointments beyond the current quarter. These are carried forward sequentially when the next quarter's data is set up. When you make an entry update, it destroys any reference to care it to deal before returning to the main menu.

While the main menu is displayed, there is a window element at the top right hand corner of the screen that displays the appointment stored over 10 days, starting from the previous Sunday. You can recall this window as required. In the bottom section of the screen there is a real time clock which you can switch on/off as Desk Diary.

One of the options from the main menu is Desk Data. This

in effect presents you to 19 other present purpose pages which can contain information. An example Desk Diary has three pages already set up, ready for your concentration and partly to illustrate how they can be used. These one pages are set up for expenses factors, another for food details, another for your tax details etc.

Any information held in Desk Diary can be searched by the Easy Analysis option. You enter the test you are searching for and a start date, so you can search for a specified date and retrieve it's appointments page. There is no option to print out anything, but I would like a Commandeer printer for printing being competing to my Epson.

Despite few other features I found it intuitive and, as my existing diary manager, a valued possession.

The verdict is fine times - L.C.

Publisher AHEAD

Address: 21 Chichester St, London SW1X 8HQ



£7.95



Spook Look

This is another maze game with built-in logic books.

The movement lead some sense of strategy, with nothing on the screen in off, apart from the occasional message to let you know that the progress is still looking.

Robot error has also indicated for too often, which means recreading the tape and setting all over again.

At the end of the game, leaving quite honoured, you are placed inside the maze and can be moved around until either the keyboard or a switch.

Your objective is to find all the hidden treasures spread throughout the 160 rooms. If you achieve this plus you have to leave the hidden treasure in a secret passage, and presumably the end of the game.

I liked the original design of the maze and spent set on very doubtful. The only problem is that repeated visits to your save station places, which opens a suitable hole of pollen at all and usually, reducing new entrance to a closed off door.

The large, slow, snail-moving graphics make the maze display pleasant, though the walls of the maze room become characteristically.

As the spiders seem to accompany from the same direction each time the game is played, a becomes competitive play to shoot it off.

On the other hand, remember which time you are in a single master, not a finding all closed rooms.

Having played the game for an undiscernible length of time with only a quarter of these levels, this would seem the ultimate challenge. D.H.

Publisher AHEAD

Address: 28, Upper Bridge Rd, Cheltenham, Glos.



£7.95

Chopper Squad

According to AHEAD while dodging a seemingly endless succession of aliens is no mean feat.

Your task is to do just that many times over, placing a helicopter between three landing pads.

The two pads appear from the top of the screen, and need to be neatly balanced and deposited at the bottom right hand corner.

To let you know how near you are to a completion, each segment is displayed at the top of the screen, in all various stages of completion. Armed with a photon proton laser blaster, your rocket-powered helicopter is maneuvered around these keys or jets.

The wrap-around screen allows movement from side to side at great speed, in your attempt to dodge the invaders.

An unanticipated bonus display uses chunky graphics, but the all important movement around the screen is smooth and rapid.

The best example occurs because having after a couple of games, the progression increases in the chopper's speed of attack, adding some suspense to each play is attained.

Comes from a major software house, would-be purchasers could be forgiven for expecting more than the fee they money. The game offers nothing other innovative or original, lacking the addictive quality of many competitively priced programs.

Locating and placing manuscripts, along with a synopsis of the story-line are all printed on the cassette tape. D.H.

Power 16

Publisher International Music

Address: London House, The Green, Tiverton, Devon.



£7.95



The Joffe Plan

When the Pro-Q program from MarconiSoft left our market, we were in need of much greater value for a weight reduction package, which naturally made you like a present up! Put your hands, weight, age and sex on repeat and as a result, your ideal weight range is calculated. From then, a target weight and the date by which you should achieve it are displayed. You can then monitor your progress as to the target date and weight. If you choose to go no further, you are warned about the dangers.

When you've reached your target, another program is loaded which is a very detailed questionnaire about your eating habits. As a result of this a personal plan is drawn up for you, which makes simple and understandable suggestions as to how you should modify your eating behaviour. Again, these results are remarkable.

You are then encouraged to take a high fibre, protein, water, cooking and diet, but enough to change your consumption of energy. Finally, you are told about previous if you are passing and don't want to do that! How power? You have to repeat all the questions on certain days so let's hope that you're doing, and a complete your results with these previously saved as target.

Excellent presentation together with a good menu and an approach to eating, exercise and self control that really does seem sensible without being oppressive. You might just succeed with this where the living traditional diets fail. It's easier to be honest with a computer!

ED M.

Price: £9.99

Publisher: MarconiSoft

Address: Holborn Circus, London EC1V 1DQ



3D Scramble

Yer folks, you guessed it, here's a revamped version of that old favourite. In case some of you haven't played it before, you pilot a space craft and must fly through a series of seven destroying missiles, fuel dumps etc. The last of the six stages contains the power capsule which must be destroyed. As you progress your fuel supply falls. This can be replenished by bombing fuel dumps.

This version also diagonal scrolling similar to ZX Spectrum and Blue Max to give the 3D effect. You fly down corridor and a testing of depth is given by each object casting a shadow. The size of shadow changes with the object's height above the ground. Your passage is impeded by missiles, flying saucers and fuel tanks which must be shot at to proceed.

In light of the lack of originality of the plot, the value of this game hinges on the implementation. In fact, the life isn't too bad. The scrolling tends to be a little jerky which does reduce the effect but overall things aren't too bad. The fast jumps and other objects are neatly drawn with a good solid feel. The flying objects, such as missiles and fuel tanks, look quite decent and are reasonably collisionable. The background graphics are reasonably well integrated but I found myself jumping a lot after a while.

Overall, not a great game, but at the price, not bad. M.W.

Price: £6.99

Publisher: Lucas Software Ltd

Address: Progress House, 31/33 Mount St, Manchester M2 4PS



Manny Is Innocent

Based on the saga of Money Man, it is an exciting adventure in which you guide Sam Glass to rescue Manny from the clutches of Scoundrel Prison. Finding Money is one problem, finding Sam is another!

You are lead past the attorney, and laws which must be returned to the governor's office until you find the key to Mr. Money's cell. That sounds straightforward enough, but the maze consists mainly of darkness, walls, windows, ghosts and stomachs, refuges of other prison inmates. Though they do move, the game will switch to different rooms, they only have fire shots, and even the human or inhumanity person wear off very quickly.

The graphics are rendered in colour, multi-coloured 3-D, so in a room, you can go round and behind things like pillars etc. The old Spectrum software limitation does not in the way every time and that, but, oh boy, the office is good. Ladders, ladders, rooms, ropes, doorways, etc., open the eyes and imagination. One of the most fun things I do is disappear down a hole, to reappear somewhere else, it's very impressive.

And it's hard... very hard. There using a special version with infinite lives, I still haven't found Money. The old boys are hard to come by, though joystick control for Kempston and Commodore 64 makes starting this easy enough.

Very well programmed and executed, good value for money, and completely plenty to keep you occupied for quite some time. There's even a secret slot offer too! D.M.

Price: £8.99

Publisher: Gemini Computer

Address: Alpha House, 10 Carter St, Sheffield S1 4PS



Zax

This is a maze type game, the idea is on this maze being paths through the puzzle.

The puzzle, like all mazes, is quite large and it is easy to get lost. There are 22 screens full of puzzle in which you seek a secret collection of 100 Zax units. Naturally the Zax are not happy about this and are constantly attacking.

You can purchase the Zax while your laser field holds up. In addition to the space upgrade there is a touch of violence in the game. If you accidentally touch a zaxcoper, and there are many because Zax are hungry people, the maze becomes unstable. The only way to make the maze stable again is to collect another Zax. Another point of note is that if you touch a second zaxcoper and missed, you disintegrate which makes it even more difficult to collect.

The game can be played in two ways, on screen and two line speeds. You can select and change the speed of play and save game work. This is a nice touch although they certainly are big in width so before getting down to collecting is natural. The screen graphics were acceptable without being outstanding. More importantly the colour limitations and were sensible, allowing everything to be seen. In addition to the usual six screens displayed, the usual type of status report, the highest score, one of level, no of maze collected etc.

This game is a good value at its price and will provide quite a few hours of happy hunting.

Price: £12.99

Publisher: Preplay

Address: Northgate House, Upper St. Martin's Lane, London WC2H 9EA



**Splat!**

Computer games used to have you through plates or smashing each other. A rock or spear appears followed by pain-mania followed by platform and levels seems to have been the pattern since 1982. How frustrating to review something which can claim originality.

You control Zappy, a rapidly flying creature — fast, not fragile — round a maze — faster or it passes moving green. The maze is large, and there's every large, on which the screen is just a window with a mostly obscured frame. In all corners every people at the start, until the user starts moving towards the window, usually out of your control. Not only must you keep on inside the perimeter of green, but you must never touch being tapped at the maze, or reaching the window edge, because, if you do, Zappy is splashed into a mushy strawberry jam.

The window changes direction without warning, and blind panic results! You really have to be sharp. There are eight levels altogether, each with new areas to collect and avoid. Getting one each new level takes some doing too! The colours, while not vibrant, make just brighten your atmosphere — or disorientation to me.

Graphics are very simple, well it's good to see pictures to change the colour, very handy for great colour effects or clash with the already saturated screens of video machines. My only real criticism is the failure to exploit the sound feature fully, otherwise, original, appealing and fun, but, with an unusual software, a little less expensive.

Price £12.95
Publisher Amsoft

Address: 109 Kings Rd,
Brentwood, Essex CM14 4EF

**Superode 2**

If he achieves nothing else, the author of this should get the award for the most modest saleswoman writer in the country. According to the instructions, this is the Amstrad version available for any computer in the world with four times as many screens as any of its competitors.

What we have is a collection of 100 student code exercises which can be incorporated as your own BASIC programs. The nature of the exercises is impressive; sorting programs, address, memory commands, sound and many other basic and plain.

The presentation is hideously bad. There is a 20 page instruction booklet which explains in detail what you get. Indeed, there are documentation programs which describe the exercises, give the size of the resource, and give saving instructions. Many demonstrations are included showing what the computer will do. Full details are given on how to set the registers and most are relocatable power management flexibility.

It would be wrong to describe such useful tools space won't allow. The graphics commands include every conceivable word you could want, file commands, border effects and many others. Probably the strongest area are the introductory resources, the utilities for program protection, program linking and debugging.

While I can't agree with the self analysis given with this package, I must admit that it's pretty good when it comes to price. The package will appeal to the designer who will want to use some fancy effects in his programs but doesn't want to learn assembly. A.W.

Price £12.95
Publisher CP Software

Address: 1 Cobis Rd, Uxbridge, Middlesex UB1 3BD

**Centre Court**

A tennis simulation, and a sticky one! You can watch the computers play itself, play the computer, or play a friend using keyboard or joystick. Options include an option, no instructions can be found for get out of it in the end. I discovered the TAB key does the job. The documentation is generally weak.

The game starts with a long racket bashing a ball clockwise with sound, then follows option chosen, down come the rules, down to perspective to get it in. The paddle, sponge and around and all there, announced at various points. The heads of the crowd follow the action, and when round after each point scored. Even the sound of the ball being hit is there. The players hit more than automated people, but they do run and serve well, and ball movement is very natural, albeit in slow motion, it is very full speed, you'd never notice a point?

All the various conventions are observed, including, television, but service and return of the ball are rather different. To serve, the left button is pushed over to throw the ball into the air, and when it is in the time of the control the strength of service. To return, the position of the player together with the direction of the ball movement determine both strength and direction. It takes a bit of getting used to, but once done, a good game results.

Required only "real" joysticks later model. Centre Court has reasonable graphics, clever sound, and lasting appeal.

Price £14.95

Publisher Amsoft

Address: 109 Kings Rd,
Brentwood, Essex CM14 4EF

**'O' Level Maths**

It was difficult to assess this program fairly, as such programming occasionally leads to the presentation of odd answers with general equations.

Essentially this is an 'O' level maths exercise one, with two places being given options a range of topics in that subject. Calculations may not be used, but programming skills are permitted. The sparse documentation does not say whether tables of logarithms, the circle of pi, etc., the data files, are also allowed. Despite some minor criticisms — the 3D graphics could have been restricted to 2 — the program fulfills its task.

It has been three years since I practised much of the maths here, and some of it was never taught in my day, but I did manage to score about 85% on both papers without preparation. Perhaps parents ought to pass it up to their local. Many of the questions test, not so much your ability to calculate, but rather your understanding of the question itself and of the subject.

For the price I found the good value for money and of use to the teacher who wishes to teach at home. One downside is not comprehensive enough to encourage progression, although it could form a valuable part of a larger revision programme — no program. Good use has been made of the graphics capability of the TI, although the menu colours are not too universal.

Price £3

Publisher Bellis

Address: 14 Station Rd, Shropshire, Shifnal



**Blogger**

Bumper is a game of a platform and levels game. A black bear is a robbery, poor task it is to offer the other bear in each room — of the house. To track them, you need a team of two which are divided around. In each room is a word consisting of running, shooting has and hide, plan, stalk, pursue, robbery, plan, stalk, etc. If you're too far behind or you're stuck move left, right or jump.

The game mode consists all the rooms, and the standard of the graphics. The graphics at games like this needs to be more than for the Spectrum. Unfortunately, this is a suspense, with great action and under-calculated moving objects. Surprisingly, even with no sophisticated graphic screen, Amsoft did display a host of tricks with some effects in certain areas.

The bear is yet to escape however, the comic is magnificent! Big time thanks to is Scott Jenkins a designer of tremendous interesting, the game does show what the classic access changes. Even so, there still it's classic, but for an exchange trap or two like the first yet again.

This isn't an easy game, but once the bug bites you, you'll keep at it. I expect you'll need a monitor to get into the higher levels. Very addictive, and if you haven't had when the usual stop on your CPC console, then buy this for starters. You won't be disappointed even though the control is rather poor and the plot, typically for the CPC 464, rather over the top. IBM

Price £19.95

Publisher Amsoft
Address 169 Kings Rd,
Brentwood, Essex, CM14 4EF

**Combat Lynx**

According to the manufacturer, you're probably the most comprehensive and most basic simulation ever written for a home computer. It is also probably the first written for solo operation with four tanks!

You control a tank helicopter and, depending on your instructions, can fly a number of missions. For example, if you're marching, you can march away at that speed. Those with tanks, on the other hand, may prefer a more sensible option.

At the start of the mission, you can select which arm you want to fire from. The range is quite overwhelming. Once started or completed, off you go. The screen gives a view of the computer-controlled tanks and things outside the workshop. The view of the enemy comes with your binoculars and telescope. You have an unbelievable range of weapons, from tank manipulation of the tank, a map and long range search. Such is the range that either two pointers or most of the keyboard must be used. In all, rather too much to remember.

The most impressive feature is the number of graphics. The view through the tank is impressively done with fluidic fine movements. Similarly, the movements are slow and frequently updated. Sound is used to great effect providing the necessary tension and exciting scenes.

This is a complex game which will appeal to the war games who enjoy a little arcade action. The implementation of the controls is quite complex and needs significant effort to master. A.W.

Price £19.95

Publisher Amsoft
Address Castle Lodge, Castle Green, Tenterden, Kent
TN14 6EP

**Detective**

There's no prima donna here, this is a complete version of the board game Cluedo. The killer has been murdered, his body dumped, and it's now up to detect the criminal from the assembled guests, together with the weapon and the location of the diary clod! Though you can play on your own, it's better with friends.

Each of you assumes the role of one character, and the idea is to choose the best for each player. This determines the maximum number of moves you can make in one turn. The choices you choose is shown as a brain head, fully drawn, and the playing area is the floor of the house. As you move into each room, you may make an accusation at no murderer and weapon for that room. The computer responds, showing you which, if any is correct. You then move about the house and gather gathering clues as to who didn't do it, and when they didn't do it with. From that, you work out who did, and with whom.

Completely this is good, with many choices, colour and nice movement. If you like Cluedo, or indeed, any too complex games of deduction, you'll enjoy this. I just let others to help me because, I find the original very boring, though that's better.

Instructions both written and on screen are adequate, but leading in is the most help. Quite reasonable as a game, but in my view not worth the sort of price £39.95 would be more realistic, and that's pricing it IBM.

Price £19.95

Publisher Amsoft

Address 169 Kings Rd,
Brentwood, Essex, CM14 4EF

**Bumper**

Bumper uses very detailed characters in both appearance and action giving the game a sense of humour but not which requires a surprising level of skill.

The idea is to become a figure called Arthur and drive a pyramid of cubes in an attempt to land on each cube as least one ledge being passed by gravity figures and coloured walls.

When Arthur lands on each cube a choice colour, can he try to dodge coloured balls which can set some of these balls change and make when they reach the bottom of the pyramid and then pass him. The 16 choices options are too slow. Arthur can jump on to one of two ledges to be transported to the top of the pyramid again. The likes can only be used once each but these are done over the three of day managing resources.

If he manages to land on all the cubes a new screen of a different colour is presented but he only has three hours to a complete bid to move through the various levels of play. However, in one completed through the game when every cube counts as a point Arthur and one figure spends as time updating all Arthur's work. As always, only my daughter decided to view these higher levels of play.

It is a competitive and highly colourful game with many subtle facets. Instructions are adequate and graphics excellent. Good value.

IBM 386

Publisher Amsoft

Address: Bayswater Rd, 188
Bills Rd, Cambridge CB2 1LQ



**Psychedelic**

This is different. It's odd, it gives you something to enjoy. As the instructions say, switch on and relax and... out.

The program does as the name says, what a madman does so sound. Essentially you can produce multi-coloured patterns on the screen by moving the joystick by moving the joystick. But any description is inadequate for that, you have to see the effects to appreciate them.

You have numerous controls over the dynamics of the display. For example you can set the width of a line. When you move the cursor across the screen you have a tool that moves smoothly through a range of colours. You can create mirrored effects, extensions, mirror images etc.

When this is loaded various different effects are passed onto the top row of keys. Apart from that you can define your own parameter settings and store key settings, one set of these keys. You can record up to half an hour's worth of your own generated light show on tape. This can all be linked back into the monitor to provide a performance that automatically repeats. You can also play the parameters on the keyboard during playback to experiment further.

If you sit in the dark staring the joystick at least the possibilities for having said that, it's one clever effort given the same commitment. More rooms or greater variety would have saved the day on this one. At the price, don't bother.

Jeff Mason has done it again. It's necessary, different and good value for money. **L.A.C.**

Prior ET 80

Publisher: Lissomech

Address: 49 Merton Avenue, Teddington, Middlesex

**Congo Banga**

Those الذين who've ever had the blues never come to come up with new ideas for games. This is a 3D blend of a number of existing concepts contained in a single scenario. That version comprises of two screens and in fact a week cassette version of an Amstrad disc based product.

On screen one you climb a mountain and reach the French of the monkey Congo. You must avoid the common Congo traps as you ascend taking in the views and down a chain muddy staircase long enough trying to fall you.

In the second screen you cross a river. To achieve this you can use climbing by pads, ladders, and bats or stepping stones. Again there are hazards such as thorns and hunger bats to avoid. Complete both sections and you start again with a greater difficulty level.

The graphics are reasonable but certainly not exceptional — the disc based version with Kodak print pictures is quite outstanding. The sound seems to comprise of just drums and doesn't really get over power. The imitation of the various creatures probably saves the day but only just.

Overall, however, there's inevitable the problem of first impression will turn off the potential buyer and that, if I'm not being harsh, given the same commitment. More rooms or greater variety would have saved the day on this one. At the price, don't bother.

M.W.

Price: £9.95

Publisher: US Gold

Address: 11a-12, The Parkway Industrial Estate, Hemming St, Birmingham B7 4YL

**Carry On Laughing**

This is another variant on the general theme of platform games. In it you take the part of Mr Lawrence, the successor of Sir Huckleberry, a school with more than its fair share of delinquents. Your task is to climb away profitably from the focus of course, from the walls whilst avoiding the usual nasties.

There are three separate platforms, different areas of the school and arranged in a three by three grid. Each screen has its own problems and requires different tactics. Some screens won't particularly encourage or dare — there is a King style screen in which you must avoid rapidly falling colliding clouds of platforms. On completion a screen you can move to the next of your choice, and you can repeat stages if you so desire. All screens require the usual combinations of jumping, running and climbing. There is not, however, a single concept to any screen, so you can skip the chapter if you want.

Graphically the game is competently with reasonable designs of figures and possible environments. The background music is well arranged, there with the odd off note, several lengthy pieces are played with sufficient variety to reflect monotony. The play is interspersed with the usual bolts and other noise.

Overall, not an earth shattering game although it's not that bad. The review copy gave unpredictable loading and save was occasional trap which gave unexpected results during play. At the price, give it a try, you might like it.

M.W.

Price: £8.95

Publisher: Lissomech Software Ltd

Address: Progress Hat, 31-33 Monks St, Manchester M10 9LQ



GRID WARRIOR

**Light cycles,
power grids,
flashing
crystals —
they're all there.
In Stephan
Anderson's
game for the
Amstrad CPC464**

As a general warning you control a light cycle on the power grid by using a switch or turn a lamp, a siren, a light and a night

The wheel is 16 inches, the finishing power crystals will remove the burrs and your own tool. You are assured a perfect surface at 1000 grits.

If your organization is based in or above than 3,000 points then you're better off the grid.

[View in context](#)

10-120 most species
 120-140 most dipterans and coleopterans
 140-160 larva, grub, etc.
 160-180 pupa, grub, etc.
 180-200 insect loop
 200-250 mounted code, crystallized

19

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B. High score
    best machine code type
    a lot good strength
    a score
    B. maximum memory
    our concentrations of memory
    storage, thus keep track of game
    stage
    Red warrior

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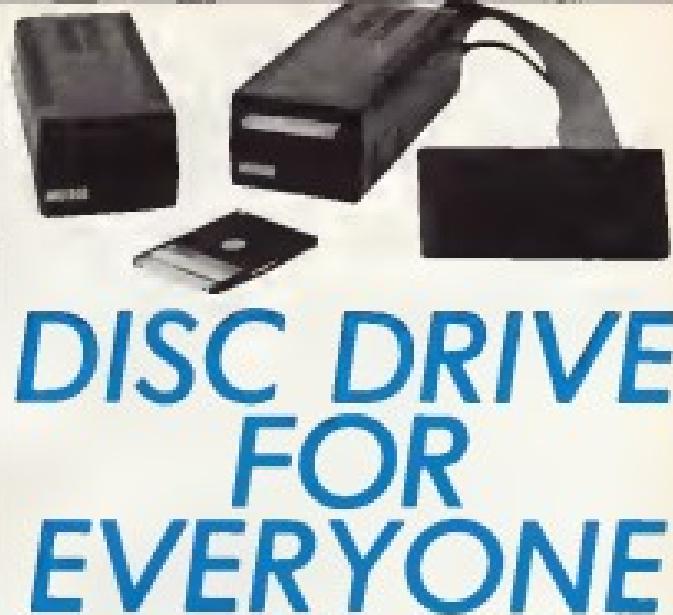
Final year placement

Laser and electron beam applications from 1980 and 1990 such as focused ion beam lithography.





HARDWARE



DISC DRIVE FOR EVERYONE

Even if you've never used a disc drive, you'll be able to follow David Holmes's rave review

Amstrad Disc Drive and Interface DDI-1

At the very majority of home computer users have never used a disc system, this reader is created in simple terms, being specifically aimed at the enormous market potential.

In appearance, the DDI-1 is a grey box containing the external Amstrad hardware. Somewhat similar than expected, but nevertheless, a proper power pack.

As a means of storing programs and data — called files — it can be likened to a cassette tape recorder. However the similarity ends there.

So first in the program to your PC's commands, thus the first time it is difficult to believe that the program has actually loaded.

Programs run which the Discdrive does, surely. It makes no noise only a few seconds away.

There's 158K of storage space on each side of the disc which provides almost instantaneous access to a considerable library of programs.

Along with the DDI-1 is a CP/M master system disc, on the reverse side of which is

the basic interface program. A comprehensive handbook is also included.

In the excitement of actually having the disc drive alongside the computer, you will be tempted to PULL IT apart! Don't do it!

The instruction book is well written, some considerable time may be spent going through it slowly and carefully. Only then can your considerable investment be fully realised.

The Amstrad floppy discs are an unusual size and consequently may not be compatible with high street shops. No problem to order up four blanks when you order the DDI-1.

I am pleased to report that Amstrad purists don't include any blank discs so that you can focus on reading the handbook thoroughly whilst waiting.

Amstrad's OS resides just

operating system. On receiving

on the disc drive, there are several additional Amstrad commands which are entered along with the ordinary BASIC commands. These enable instructions to be passed to the disc drive from the keyboard.

Using CP/M gives full access to the numerous commands and routines, allowing you to maximise on the advantages of your disc system.

The instruction manual explains CP/M of some length.

Further information can be gained from Soft 159 — A Guide to CP/M, available from Amstrad.

So how is the Amstrad disc drive. A well constructed electronic device which will delight you with its performance.

Price £199.95

Amstrad, Brookwood Hill, 199 Kings Rd, Brookwood, Berkshire

AMSTRAD



Quicksilva



1 9 8 5

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Quicksilva

Introduction

From the pioneering days of home computer games software Quicksilva has been a major force in the market. Since formation in 1981 Quicksilva has gone from strength to strength and built up a formidable reputation as a producer of quality, innovative and commercially successful software titles.

If 1984 was the year of the Game Lords, 1985 will be the year the Game Lords conquer the world, with new titles added to the existing range, a wider variety of computers catered for and exciting new licensing agreements and deals with book publishers and TV characters—all to be sold worldwide.

IN THE BEGINNING

Quicksilva came into being at the beginning of the games computer breakthrough. Mick Lambert was the original founder and, being an electronic engineer by trade and a pub video games fanatic by nature, the idea of transferring his favourite games onto home computers was obvious. He was the proud owner of a ZX80, and later a ZX81, and set about it immediately.

Before moving heavily into creating computer games Quicksilva developed a variety of peripherals and add-ons for the ZX81 which were very well received. But when the mail order sales of games took off like a rocket it was obvious that the software path was the one to follow in future.

So Quicksilva Ltd was formed—the name coming from Mick's favourite group, Quicksilver Messenger Service. Now there was no holding QS back. With the advent of the first colour home computer, the Sinclair ZX Spectrum, more

programs and upgrades were developed and launched.

In 1982 the release of Timegate, the first ever truly 3D computer game, was a significant step in QS's progress. It heralded them into the top league of software producers. An office move into larger premises followed and Mark Eyley joined Mick and John Holtis to supervise marketing.

Wri Smith had by now realised the potential of the games market and were selling Spectrum computers through their stores. Smiths approached Quicksilva and asked if they could sell their software in their retail shops. A deal was struck which marked a turning point in the market and Quicksilva were there first. Then Rod Corsoone joined to run the business strategy side of Quicksilva.

Now Quicksilva has expanded into several areas—more software titles for more computers, more staff, another office move, the formation of the Software Studios and a link-up with record company CBS who are now responsible for software manufacture and distribution.

The Software Studios was formed in 1983 and is the company's specialist development facility. Quicksilva's aim in setting up the Studios was to bring up the standard of their games to a very high quality, by investing in sophisticated equipment and programmes with extra special skills. Games Designer was the first product to come out of the Software Studios and fulfilled all Quicksilva's aims. It was the first program of its kind, an innovative concept which has since been 'borrowed' by other firms, as well as being a best seller.

It has always been Quicksilva's policy to concentrate efforts on developing strong overseas sales base and this, combined with the stress which demand puts on products placed on manufacturing, prompted Quicksilva to look for a partner in this area. CBS fitted the bill and now handle manufacturing, distribution and sales for Quicksilva, throughout the world.

And as part of Quicksilva's expansion across a range of hardware they have agreements with smaller firms such as Salamander Software, Ultimsoft and New Generation Software to convert their successful games and market them. This strategy will continue as QS sees itself as a publishing house with its own in-house resources as well as the expertise of third parties and their products.

Since its formation Quicksilva has made sure that its presence is felt in the market by imaginative, aggressive advertising campaigns, quality products, and regular appearances at major computer and electronics shows worldwide, from Britain's Personal Computer World Show, across the Atlantic to the Consumer Electronics Show and on to the Far East for Singapore's PerCompAsia exhibition.

At the end of May, 1984, Quicksilva was bought by the Argus Press Group, the publishing and communications arm of BET (British Electric Traction Company). And this ensured the stability, security and growth pattern of Quicksilva remained intact at a time when the home computer software business became increasingly precarious.

Remember... Quicksilva 1985—the year the Game Lords conquer the world.

COMING SOON FROM QUICKSILVA - 1985

This year Quicksilva are poised for further expansion and currently under way are several exciting new projects within the software industry.

POP GOES SOFTWARE WITH THE THOMPSON TWINS

In constant search of original material which appeals to the now highly critical home software audience Quicksilva have teamed up with the successful pop trio, The Thompson Twins.

This liaison stemmed from a partnership made with the Twins in 1984 when they made a demo-disc together, around a computer game, which appeared on the front cover of the computer games magazine, Computer and Video Games.

Now the team have undertaken to produce a fully fledged game which will be released through Quicksilva's dealer network. At the moment it's still at the story board stage and the end result promises to be an arcade adventure strategy. The program will feature some of the Thompson Twins' music and the game will revolve around some antics that the Twins get up to.

This partnership with the Thompson Twins is the first link up with popular recording artists, but Quicksilva are keen

to follow it up with more games involving a wider variety of artists and stars. As this new game is still in the very early stages the actual release date has not yet been decided. But it's certainly one of Quicksilva's most exciting new projects to keep an eye on.

This exciting competition begins in April and entrants stand to win an all-expenses paid trip to the fantasy land of Disney World in America, as well as Sinclair's latest

THE OBSERVER

Home Computer Championships

As part of Quicksilva's promotional campaign during 1985 they have sponsored, jointly with Sinclair Research, the newly founded Observer Newspaper's Home Computer Championships.



MORE SOFTWARE

As well as Quicksilver's own brand name for its active range of games software, *The Game* lands, in 1983 they also launched a range of educational games under the label GED. Although at the moment the number of these titles is only a few, Quicksilver is poised to launch many more when they feel the market is large enough to justify them.

Even Quicksilver's educational software has an element of fun in the products and it is the company's firm belief that all their packages are essentially 'recreational'. So the learning process involved in educational programs is made much easier and appeals much more to children.

Following the success of *The Snowman*, that enchanting program based on the famous book of the same name by Raymond Briggs, this year will see similar projects launched. The first planned is a game about the slimy creature in the very popular book, *Fungus the Bogeyman* and will probably follow some of his adventures in the book.

In addition to Quicksilver's tie-ups with book publishers, plans are also in the pipeline for franchising both film titles and music/recording artists. For instance the company has recently won the rights to produce the program for the film, *Pirates! Voyage* which will be on sale from March this year.

Many more exciting new Quicksilver products will be on their way during the course of 1985 – and the ever-changing nature of the software industry means that you never know what the next three months will bring.

after another competition to do with the Games Designer product.

Throughout the competition consolation prizes will be awarded to the less successful entrants, and every entrant will be given a £1 voucher against any Quicksilver software. These vouchers will be redeemable in any dealer shop, or retail outlet stocking Quicksilver products.

Make sure you watch out for the *Observer Sunday Colour* supplement during April 1985 so that you don't miss the chance of a lifetime – a free trip to Disney World.

ON THE MOVE AGAIN

As Quicksilver's reputation and business has grown since its formation so has the number of staff it employs. Now there are 16 members of staff and the company has, for the fourth time, outgrown its offices.

For some time they have been looking around the Southampton area for alternative office accommodation and are shortly to move into the building Quicksilver's new address will be Carlton Lodge, Carlton Crescent, Southampton

computer, the QL. The competition centres on Quicksilver's adventure game Xadom and all entrants must answer correctly a number of questions relating to the game.

Once all the entries have been received there will be a selection process whereby the judges will come up with 16 finalists. The lucky 16 will then attend the competition finals to be held at London's Metropole Hotel and they will have to take part in a play-off involving Xadom before moving on to the next phase. Eventually a top four set of final finalists will emerge and the overall winner will be arrived at

A Tony Crowther/Quicksilva Production

BLACK THUNDER

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Software developed by WHIRLWIND • ROLLING STONE • COMPUTER WORKS
and independently produced by Quicksilva Computer Games Ltd



MASTER MINDS.



PASS ALL THE QUESTIONS
AND DISCOVER THE ANSWER...

- If you can write logical programs, convert them into machine language and submit your results to us via e-mail. Then you may be the person we are looking for.
- Are you a young computer guru based in the UK? If so, then our "Young Computer Guru" competition is for you. Enter now for a chance to win £1000.
- But how are you? Please take part in the "Quiz of the Year" competition. You could win £1000.

For more details on the above competitions, visit www.quicksilva.com.

The answers to all the questions in the quiz are:

- If you want to join the mailing lists on the Internet.
- If you want to buy a computer system, why not go to a Quicksilva store? There's one near you.
- A copy of my last "The Quicksilva Quiz".

Quicksilva.com

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Software out now

● BLACK THUNDER

A great action arcade game featuring helicopter and tank battles, superhuman heroes and evil wizards. Guaranteed to keep any arcade fanatic happy for hours.

● ZOMBIE, ZOMBIE

Introducing these fixes for the ZX Spectrum in this new arcade/adventure - invincible, softcoloured colour graphics, simultaneous two channel sound, and compatibility with the versatile MUD interface.

● CASTLE OF JASOON

A real time action interactive film - spectacular arcade and adventure graphics. Play as you are the rightful ruler of Jasoon by finding the fabled Jasoonian diamond and set right the evil deeds of the murky past.

● DUNGEONS OF RA

Norman Warrior strikes again in a challenging adventure in search of the fabled Beastone. No one has come out of the dungeons, which contain the stone... alive - could you be the first?

● STRONTIUM DOG

- *The Killing*
2000 AD's super comic character Johnny Alpha comes to life in the game of the comic story.

● STRONTIUM DOG

- *And the Death Genetrix*
Search and Destroy Agent Johnny Alpha gets into some more tricky trouble tracking down renegade Strontium Dogs. Only you can see him to safety across the deadly Planet of Renegades.

● DOODLE

The perfect graphics program for your every need. This graphically amazing colour sketch pad lets you go directly to most programs.

● BATTLEZONE

Quickdrive bring you the *only* officially approved Spectrum version of Atari's tremendously successful arcade game hit.

● OUTPOST

An excellent arcade/strategy game for the Amstrad, which can be played entirely by joystick.



QUICKSILVA PRESENTS
BLACK THUNDER
BY TONY SHORTNESS

REALABLE SOUND
DISCMASTER 128 KB
DISK 212 KB

TURBO LOAD
COMMODORE 64
100% BY 100% COMMODORE

BATTLEZONE
ACTION FROM
QUICKSILVA

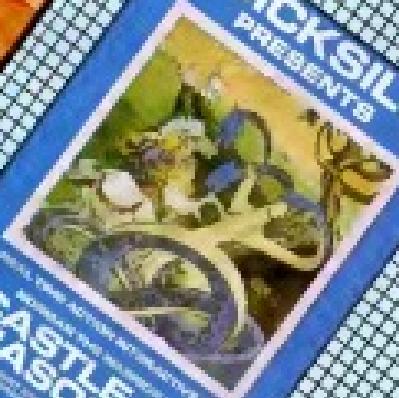


ZOMBIE ZOMBIE
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PRESENTS
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PRESENTS

**CASTLE OF
JASOOM**





QUICKSILVA PRESENTS



SUMMER GAMES

Superbly realistic Olympic type games to play—eight different events to tackle, opening and awards ceremonies, action and strategy in each event. Graphically this game is fabulous—buy it, see it and believe it.



SUMMER GAMES

GATECRASHER OLYMPIC GAMES FROM QUICKSILVA



GATECRASHER

The ultimate arcade game of skill and strategy that will test your mind to its limits, in full colour animated graphics, special 'earthquake' feature, superb sound and seven levels of difficulty.

Please turn to p14 for a complete Quicksilva product list.

ERIC BRISTOW'S PRO-DARTS

A realistic and addictive darts game for the 48K Spectrum, endorsed by the sport's champion, crafty Cockney Eric Bristow.

GRYPHON

An arcade fantasy featuring Gryphon, the ultimate griffin. Help him survive the threat of the evil Id Monsters who are after his treasured hoard of gold.

READ WHAT THE PRESS SAY ABOUT QUICKSILVA GAMES

Which Micro & Software Review:
Summer Games . . .
sets new standards for graphics and animation. The opening sequence is enough to make your jaw drop—it's more like watching a cartoon than a computer game!

**Yorkshire Evening
Press:**
It's difficult to imagine a more impressive arcade/strategy than Quicksilva's *Attack*.

Northern Echo:
Black Thunder
(Quicksilva) is a classic—fast, furious and dynamic—and among the best releases of the year for Commodore 64.

Derby Evening Telegraph:

Zombie, Zombie—
Verdict: Annoyingly good.
Streetwise Dog, The
Killing— **Verdict:**
Competing.
'Quicksilva's Sea-Saw'
for the C64 is sheer fun!
Verdict: Good for a laugh!

Daily Express:

"Summer Games may be a bit out of season, but this Olympic sports simulation can even give Daley Thompson a run for his money."

HOW ABOUT THE HARDWARE?



When Quicksilver first went into operation it produced basic games for the now crude ZX80, followed smartly by the ZX81 and later progressed to the first colour home computer, Sinclair's ZX Spectrum.

It was natural for Quicksilver to evolve as a 'ZX' software producer, largely because at the time of Quicksilver's conception the only home computer on sale and at an affordable price was the ZX80. Although remarkably ahead of its time in terms of price/performance, in comparison to today's vast range of home computers the ZX80 was extremely basic and had limited, well practically no, graphics capabilities.

But it was the only home computer around. Not for long though. Soon came Sinclair's ZX81, an improvement on the 80 but still with limitations, and it quickly sold in huge numbers but quality software was lacking. Until Quicksilver arrived on the scene, and software sales took off in line with hardware

sales. When the Spectrum superseded the 81, Quicksilver were able to produce really stunning games, and these too sold in huge numbers along with the hardware.

It was now obvious that it made good business sense to write software for the best selling computer hardware. And after the arrival of the Spectrum on the home computer scene the emergence of many other similar computers—notably Commodore Business Machines' VIC 20 and Commodore 64, the BBC Model B, Atari's range and most recently the Japanese MSX range of computers.

If a particular make of computer sells well, they support it—a common policy among software suppliers. Likewise when sales of a piece of hardware die down, so do software sales which is why Quicksilver is no longer actively promoting the ZX81, although there are old stocks of the early games which can be bought at knock-down prices.

Quicksilver currently produces software for the ZX Spectrum, C64, BBC B, Electron, Amstrad and MSX. The majority of games out now run on the Spectrum and C64 and with the 64 Quicksilver is keen to make use of its superior sound facilities. This year will see an expansion of software products available for the Amstrad and MSX range of machines. In fact, discussions are afoot between Quicksilver and Amstrad to develop software for Amstrad's 8 bit and 16 bit computers as well as developing material for use on 68000 chip computers.

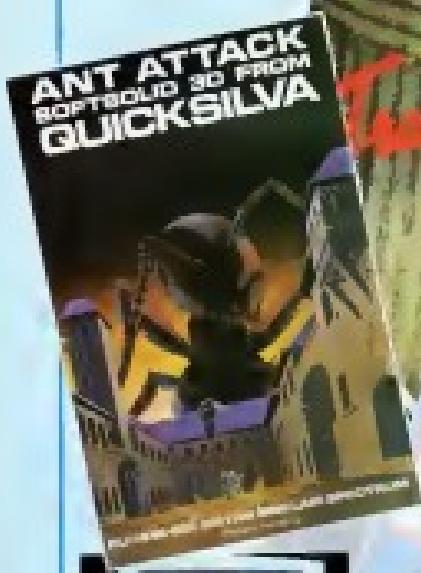
Already Quicksilver has completed five conversions to run on the MSX range of computers now available. Titles include *The Snorkelman*, *Art Attack*, *Prad*, *Games Designer* and *Boogebax*. Plans are already under way to convert programs for the Amstrad computer, which has sold very well in 1984. Also work is now under way on software for the second generation of MSX computers.

Over the past couple of years Quicksilver have made agreements with other software suppliers and hardware manufacturers for conversion rights in order to expand the firm's software range and coverage of computers.

So far deals have been struck with Ultimsoft, New Generation Software and Salamander Software to convert and market their best selling games—sometimes conversions are from Spectrum to C64 and vice versa. This type of agreement is to continue throughout 1985 so you can expect to see on sale a much broader range of third party labels from Quicksilver and a wider variety of computers catered for.

QUICKSILVA'S GOLDEN OLDIES...

Remember those past super hits which zoomed to the top of many a Hall of Fame? All these games are evidence of QS's insistence on high quality products.



ANT ATTACK
Quicksilva's classic arcade game in stunning Softacid 3D graphics. The Walled City of Antscheer, suspended in a time gone by must now defend itself and its ant inhabitants from the destructive couple He and She.



TURBO LOAD
based on the book by
RAYMOND BRIGGS
Author of *The Snowman*

TRASHMAN

You'll get more than a load of rubbish in this arusing arcade game, originally developed by New Generation Software. Watch out for mad motorists, crazy cyclists, and rate housewives when employing these bins.

GAMES DESIGNER

The game that allowed you to create your own games. Another QS first. This simple to use program requires no programming knowledge, and with it you can design your own animated aliens, shapes, vehicles and explosions giving smooth arcade quality still highly popular and available on a wide range of computers.

THE SNOWMAN

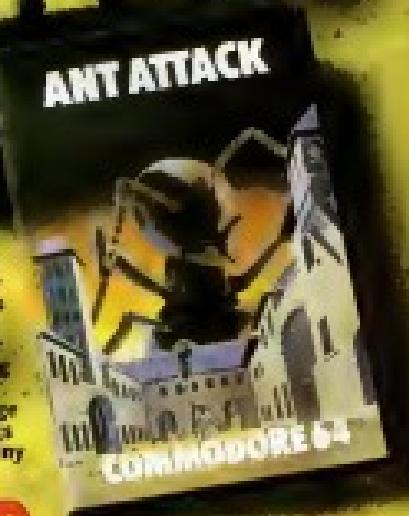
Raymond Briggs' book is brought enchantingly to the screen. Build up the complete Snowman, and clothe him before the mid-day sun melts him away. Now at least 18 months old, "The Snowman" is still in great demand by a range of computer owners.

TIMEGATE

Quicksilva's first ever 3D computer game was a top-selling product of its time back in 1982.

**They came from out of the desert to
the lost city of Antescher and discovered
the HORROR of the ANTS...**

ANT ATTACK 3D



The Walled City of Antescher has rested for a thousand, thousand years in the midst of the Great Desert inhabited by only the deadly Ants who have made it their home.

Then one day He and She arrive to play their games through the wind-swept streets, ousting the Ants from their exclusive occupation.

But the City seems to have a presence, a huge breeding entity which hangs over the buildings and in some mysterious way controls the destiny of those below ...

ANT ATTACK 3D
Turbo load Commodore 64 £8.95

available from

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Also available at:
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QSF-0011 Generator	£ 6.95
QSF-0012 Robin Hood	£ 6.95
QSF-0013 Eric Schaefer	£ 6.95
QSF-0014 Spectrum Dog - The Kitten	£ 6.95
QSF-0015 Zombies, Zombies	£ 6.95
QSF-0016 Mondo 'n' Goro (Fantastic Voyage)	£ 6.95



COMMODORE 64

QSC-0009 Ultravox	£14.95
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QSC-0012 Beespoof	£ 7.95
QSC-0013 Touchman	£ 7.95
QSC-0014 Health	£ 7.95
QSC-0015 Fred	£ 7.95
QSC-0016 Art Attack	£ 6.95
QSC-0017 Jammer Games (C64)	£14.95
QSC-0018 Jammer Games (Disk)	£19.95
QSC-0019 Bee-Slow	£ 7.95
QSC-0020 The Sorcerer	£ 7.95



The above list contains details of Quicksilva's most recent software releases. You can buy them from any Quicksilva distributor or dealer throughout the country, or mail order direct.

From Quicksilva (see the coupon at the bottom of the page):

A list of old stock software at discount prices for the ZX81, VIC 20 and BBC computers is available upon written request.

ZX81/BBC Spectrum Dog - The Death

Commodore	£ 7.95
QSC-0009 Magic Mirror Mission	£ 7.95
QCD-0001 Castle of Jesters	£13.95
QCD-0002 Empress of the Sun	£12.95
QCD-0003 Beedle (Disk)	£14.95

BBC

QBB-0027 Music Processor	£14.95
QBB-0041 Bee-Beetle	£14.95
QBB-0042 Generator	£ 8.95
QBB-0070 Beez Kit	£ 9.95

ELECTRON

QSE-0008 Generator	£ 8.95
QSE-0009 Blaster Kit	£14.95

ATARI

QAD-0014 Beespoof (Disk)	£12.95
--------------------------	--------

MIXE

QSI-0007 Game Designer	£9.95
QSI-0008 Art Attack	£ 7.95
QSI-0009 The Sorcerer	£ 7.95
QSI-0010 Fred	£ 7.95
QSI-0021 Beespoof	£ 7.95

Write to:
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Telephone (0703) 265155.

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ON SALE NOW



NEWS ON DEALER DEALS

Things are looking up for dealers who are wise enough to keep a constant stock of Quickdrive software.

Quickdrive is on the look-out for more outlets for its products, other than those already involved in CBS's distributor network. Special discounts and incentive schemes are either operating now, or are shortly to be introduced. These include:

- **Special offers** for every 10 Quickdrive programs you take delivery will get one free.
- **Volumes related discounts** (details available from Quickdrive—just contact by filling in and sending off the Business Reply card overleaf).
- **Special incentive competitions**. To be introduced this year. A range of competitions open

exclusively to Quickdrive dealers in which you could win a fabulous dream holiday—if you top the performance figures from participating Quickdrive dealers.

- **Point of Sale material**—high quality, eye-catching posters to draw attention to your shop and Quickdrive products. Also calendars, scarves, badges, hats and T-shirts are given to dealers as part of special sales campaigns for a variety of Quickdrive products.

Quickdrive, through CBS, is a firm believer in looking after its dealers and distributors. That's why Quickdrive formed, in conjunction with Virgin

Software and Bug Byte, the Software Sales Service. This organ is responsible for producing all Point of Sale material and is there specifically to provide an efficient service for dealers.

Quickdrive wants to contact you, and help you increase your business by selling its products. With Quickdrive solid, established reputation for quality products and its secure financial backing you cannot afford not to take part in the company's growth in 1985.

Simply complete the brief questionnaire overleaf, tear off the page, fold it as directed and post it in your nearest post box as soon as possible.

QUESTIONNAIRE - QUICKSILVA

QUESTIONNAIRE - QUICKSILVA

1 What is your company name?

2 What is your address?

Telephone No

3 Is your shop a small independent/part of a retail chain?

4 Do you sell computer hardware and software/other electrical goods?

5 If you already stock software, which computers do you cater for?

Spectrum Commodore 64 BBC B MSX Amstrad

Any other? If so, which makes

6 Have you ever been asked to stock Quicksilva software in the past? Yes No

7 Do you currently stock any Quicksilva software? Yes No

8 Which category of software do you sell most of?

arcade games adventure games utility programs business programs sports simulations
space games non-space games

9 Would you like to receive further details of Quicksilva's discount and incentive schemes? Yes No

FIRST FOLD



THIRD FOLD

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SECOND FOLD

HARDWARE



George on his own...

George is lovable, cute — and controllable. He'll do what you want, within reason, and he's more than just a toy.

Jonathan Berry took him home to play

BY GEORGE! IT'S A ROBOT

George
\$19.95

George is a robot, small, friendly and controllable. He has one red wheel on the floor and wheels around almost at you when you nod. George doesn't need a computer — he already has one in his head, a special tiny bit of memory which stores his many moves.

This type of robot provides me much opportunity for children to understand what programming is all about. This is no well-known new invention; that is, a number of primary schools have robots like George and use them with very young children before they use the computer. Programs are fed into the robot by the buttons on the top of his head and a set range of movement is available.

George remembers and learns words. George can now lift and move, move in three different speeds, called gears in the manual, and he can even make a great deal of noise. He has four red eyes — could he have things to do with his drinking habits — and a telescopic guide light. The most disappointing feature about him is his hands don't move.

With 100 buttons to be programmed with up to 48 movements which take a period of about one hour should you want to wait that long for him to do his tricks. Commands are entered in the form of directions there are. All commands can be multiplied by any number so that to get a walk of 21 seconds you can enter either forward nine times three or forward three times seven. He has the added advantage of running a little about because... The

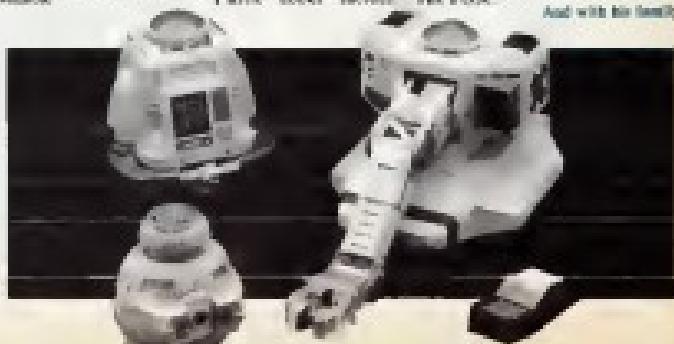
numbers relate to time, so that if you set George to high gear he will go further each second than when he is at a lower gear.

To get George to move at all there are two commands available, the Go toy and the Reverse running toy. The first executes the program as you have typed it in, while the second runs the program as typed and then starts it at random so that George should end up back where he started from. I use the word should because my parents think it is a considerable degree of error.

George is well built, comes with a fantastically written manual which covers all the points and has already provided many hours of fun in our household. I have often had to ask it to eat apple pie at least five batteries, four pen cells and a 9v

text.

And with his family



USER DEFINED CHARACTERS

What the book is weighed on, characters from code 128 to 192 are predefined. To use them all, type:

FOR A% = 128 TO 192
NEXT A% RETURN

The set consists of the alphabet in upper and lower case, various punctuation marks and numbers (in space 480 to the Over Grade) the examples last. As you may know, characters from ASCII code 224 to 255 may be defined by the user to be of any shape he wants. These are called user-defined characters, and for many programs they are very useful and provide that professional touch. In this article, I will explain the principle of developing them.

Each character is made up of a matrix of 8 x 8 dots. Programming these graphics requires the appropriate data at the memory using the VDU23 command. The first step is to draw it on a suitable piece of graph paper.

Take Fig. 1, a picture of an arrow, for example. This character would be useful for a sheet-'em-up! The character must be converted into memory form so that the BASIC understands. First separate the black squares by spaces and the filled squares by zeros. Now the data should be in Fig. 2. Each row represents a binary (base 2) number in the range 0 to 128. Since the library will only accept numbers in base 10 (otherwise we have 16 hexadecimal), these numbers must be converted to base 10 or 16. To do this, each column is given a value, starting with the

In the first of a series Shingo Suguro explains the basics of defining your own characters

left most column with 128, the next 64, the next 32, and the rightmost column.

To convert a binary number to decimal, you add the values of each column that are filled in. Having done so for all eight rows, the values for each row should be as shown in Fig. 3. These numbers must be fed into the computer using the VDU23 command. The user may redefine ASCII codes from 224 to 255. The VDU23 is followed by the ASCII code of the character you wish to redefine and then the eight values for this character. Therefore, to redefine character 224 as be the letter 'A', type:

VDU23,224,192,64,128,23,
8,128,

128,128,128

You may choose a by typing PRINT CHR\$(224) or VDU23. Try it now, but don't forget, you cannot display user-defined characters in PRINT\$! (unless of course a special character set is in the card). Also, you can print more than one user-defined character next to each other in order to obtain just one defined character.

As you see, although defining characters is easy in principle, it takes time and can be error-prone. In future articles, I will describe a program which makes the short-cut of developing your own characters. In the meantime, I have designed a few characters for you to play around with.

Character	00000000	-128+128+128+128+128
	00000001	+128+128+128+128
	00000010	+128+128+128+128
	00000011	+128+128+128+128
	00000100	+128+128+128+128
	00000101	+128+128+128+128
	00000110	+128+128+128+128
	00000111	+128+128+128+128
	00001000	+128+128+128+128
	00001001	+128+128+128+128
	00001010	+128+128+128+128
	00001011	+128+128+128+128
	00001100	+128+128+128+128
	00001101	+128+128+128+128
	00001110	+128+128+128+128
	00001111	+128+128+128+128
	00010000	+128+128+128+128
	00010001	+128+128+128+128
	00010010	+128+128+128+128
	00010011	+128+128+128+128
	00010100	+128+128+128+128
	00010101	+128+128+128+128
	00010110	+128+128+128+128
	00010111	+128+128+128+128
	00011000	+128+128+128+128
	00011001	+128+128+128+128
	00011010	+128+128+128+128
	00011011	+128+128+128+128
	00011100	+128+128+128+128
	00011101	+128+128+128+128
	00011110	+128+128+128+128
	00011111	+128+128+128+128
	00100000	+128+128+128+128
	00100001	+128+128+128+128
	00100010	+128+128+128+128
	00100011	+128+128+128+128
	00100100	+128+128+128+128
	00100101	+128+128+128+128
	00100110	+128+128+128+128
	00100111	+128+128+128+128
	00101000	+128+128+128+128
	00101001	+128+128+128+128
	00101010	+128+128+128+128
	00101011	+128+128+128+128
	00101100	+128+128+128+128
	00101101	+128+128+128+128
	00101110	+128+128+128+128
	00101111	+128+128+128+128
	00110000	+128+128+128+128
	00110001	+128+128+128+128
	00110010	+128+128+128+128
	00110011	+128+128+128+128
	00110100	+128+128+128+128
	00110101	+128+128+128+128
	00110110	+128+128+128+128
	00110111	+128+128+128+128
	00111000	+128+128+128+128
	00111001	+128+128+128+128
	00111010	+128+128+128+128
	00111011	+128+128+128+128
	00111100	+128+128+128+128
	00111101	+128+128+128+128
	00111110	+128+128+128+128
	00111111	+128+128+128+128

Character	00111111	-128+128+128+128+128
	01000000	+128+128+128+128
	01000001	+128+128+128+128
	01000010	+128+128+128+128
	01000011	+128+128+128+128
	01000100	+128+128+128+128
	01000101	+128+128+128+128
	01000110	+128+128+128+128
	01000111	+128+128+128+128
	01001000	+128+128+128+128
	01001001	+128+128+128+128
	01001010	+128+128+128+128
	01001011	+128+128+128+128
	01001100	+128+128+128+128
	01001101	+128+128+128+128
	01001110	+128+128+128+128
	01001111	+128+128+128+128
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	01010010	+128+128+128+128
	01010011	+128+128+128+128
	01010100	+128+128+128+128
	01010101	+128+128+128+128
	01010110	+128+128+128+128
	01010111	+128+128+128+128
	01011000	+128+128+128+128
	01011001	+128+128+128+128
	01011010	+128+128+128+128
	01011011	+128+128+128+128
	01011100	+128+128+128+128
	01011101	+128+128+128+128
	01011110	+128+128+128+128
	01011111	+128+128+128+128
	01100000	+128+128+128+128
	01100001	+128+128+128+128
	01100010	+128+128+128+128
	01100011	+128+128+128+128
	01100100	+128+128+128+128
	01100101	+128+128+128+128
	01100110	+128+128+128+128
	01100111	+128+128+128+128
	01101000	+128+128+128+128
	01101001	+128+128+128+128
	01101010	+128+128+128+128
	01101011	+128+128+128+128
	01101100	+128+128+128+128
	01101101	+128+128+128+128
	01101110	+128+128+128+128
	01101111	+128+128+128+128
	01110000	+128+128+128+128
	01110001	+128+128+128+128
	01110010	+128+128+128+128
	01110011	+128+128+128+128
	01110100	+128+128+128+128
	01110101	+128+128+128+128
	01110110	+128+128+128+128
	01110111	+128+128+128+128
	01111000	+128+128+128+128
	01111001	+128+128+128+128
	01111010	+128+128+128+128
	01111011	+128+128+128+128
	01111100	+128+128+128+128
	01111101	+128+128+128+128
	01111110	+128+128+128+128
	01111111	+128+128+128+128

Character	01111111	+128+128+128+128+128
	10000000	+128+128+128+128
	10000001	+128+128+128+128
	10000010	+128+128+128+128
	10000011	+128+128+128+128
	10000100	+128+128+128+128
	10000101	+128+128+128+128
	10000110	+128+128+128+128
	10000111	+128+128+128+128
	10001000	+128+128+128+128
	10001001	+128+128+128+128
	10001010	+128+128+128+128
	10001011	+128+128+128+128
	10001100	+128+128+128+128
	10001101	+128+128+128+128
	10001110	+128+128+128+128
	10001111	+128+128+128+128
	10010000	+128+128+128+128
	10010001	+128+128+128+128
	10010010	+128+128+128+128
	10010011	+128+128+128+128
	10010100	+128+128+128+128
	10010101	+128+128+128+128
	10010110	+128+128+128+128
	10010111	+128+128+128+128
	10011000	+128+128+128+128
	10011001	+128+128+128+128
	10011010	+128+128+128+128
	10011011	+128+128+128+128
	10011100	+128+128+128+128
	10011101	+128+128+128+128
	10011110	+128+128+128+128
	10011111	+128+128+128+128
	10100000	+128+128+128+128
	10100001	+128+128+128+128
	10100010	+128+128+128+128
	10100011	+128+128+128+128
	10100100	+128+128+128+128
	10100101	+128+128+128+128
	10100110	+128+128+128+128
	10100111	+128+128+128+128
	10101000	+128+128+128+128
	10101001	+128+128+128+128
	10101010	+128+128+128+128
	10101011	+128+128+128+128
	10101100	+128+128+128+128
	10101101	+128+128+128+128
	10101110	+128+128+128+128
	10101111	+128+128+128+128
	10110000	+128+128+128+128
	10110001	+128+128+128+128
	10110010	+128+128+128+128
	10110011	+128+128+128+128
	10110100	+128+128+128+128
	10110101	+128+128+128+128
	10110110	+128+128+128+128
	10110111	+128+128+128+128
	10111000	+128+128+128+128
	10111001	+128+128+128+128
	10111010	+128+128+128+128
	10111011	+128+128+128+128
	10111100	+128+128+128+128
	10111101	+128+128+128+128
	10111110	+128+128+128+128
	10111111	+128+128+128+128

HARDWARE

THREE ENTERPRISE

Three pairs of eyes focused in on the Enterprise. Jonathan Berry, seasoned computer user, had different criteria to Genevieve King and Marianne Johnson, two complete novices. Experienced or beginner — the end verdict was much the same

Expert view

For a programmer the most important feature of any machine is the language that the machine uses. My first job therefore was no choice of the BASIC that the Enterprise uses is a modern and capable language. There are certainly a number of commands and structures which aren't present in any other version of a home computer. There are full function defining commands and a whole group of looping commands that can cut the construction time both the beginner and the end of the loop.

The range of built-in functions is also vast, with over 80 such commands. In fact I find this large range of words really overwhelming. I know that most programmes use

only a small range of words and that having this one range is, theoretically at least, of great advantage but I feel that it is likely to put as many programmers off the language as it is to attract them. Wonderful programs have been written with much less developed languages and I wonder if here we have a prime example of the law of diminishing returns.

The manual is also rather less than I had expected. The first section is of a general nature with 38 pages of introduction to the machine. This leaves just 60 pages for the reference section and I feel that this is far too little — all the types are squashed into a very small space indeed. The amount of detail is far less than I had expected both in terms of the language

and of the machine itself. There is reference to a technical manual, but this isn't really good enough. I am of the opinion that if you've bought a machine that you have the right to information about it's inner workings without having to pay extra expense.

Finally, the most important part of all is the error reporting programme. They are accessible from BASIC with no problem whatsoever and the messages are of a reasonably explanatory nature, but there is no detail given in the manual about the errors. Perhaps this, too, is in the technical manual, but I should have been in the standard one. Information about memory usage is confined to just 13 lines and the whole of the operating system deals with just four and a half pages.

The machine is pleasant to use with a good on-screen editor which makes correction of typing errors very simple indeed. The picture is not as clear as I had expected on a normal TV, although I believe that this is much improved by the use of a monitor.

The areas which are most likely to cause new users are the sound and graphics commands. These are very well thought out





and you have control of almost every aspect of the operation. The sound commands is followed by details of all the parameters you want to set and instead of following a strict syntax standard you can use the parameters in almost any order preceding each one with its name. This means that you have a very flexible, if wordy, system.

Programs are fully definable in almost every respect and with 256 of them I can't see anyone running out of possibilities. While I wouldn't recommend that you build in too many new features for these envelopes, there is control of pitch and volume across a number of phases and there can be synchronised movement of a number of channels too. As there are two speakers and each envelope can be set up with different volumes, no such speaker share at the possibility of creating some very sophisticated audio programs.

The graphics too are quite amazing. You can set windows for both text and graphics and these can be accessed by using a character command from BASIC. Each of these windows can have a graphics 80x40 or either three lines or more across the screen without distortion. The range of 256 colours can be an exciting prospect, but with only 16 available at any one time, assuming that you want a reasonable resolution too, this changes the concept slightly.

There is no doubt that the graphics display, taken individually at least, has a range of features which aren't available anywhere else, but it is very difficult to set this stage up with the information given in the manual. There is the feeling that a number of users will end up like dazed lunatics indeed.

The most disappointing feature of the whole machine is it's lack of speed. To say that the Emerson is slow is too kind. This can be seen when you load almost any graphic program, but it's particularly true with some type games.

In a couple of simple tests running the same programs, the Emerson proved to be three times slower than a BBC. On

one test the BBC took less than nine seconds whilst the Emerson took over 20. This was without any complicated synthesis or use of the unusual functions. If you're programming, this means you either have to use machine code or be very efficient in your use of program loops.

Overall this is a nice machine with a whole host of new and exciting features, but without the quality of support I would expect, I would not be too confident about its marketability. For the beginner and novice the advanced user I would like to see the price fall to about £2300 as I feel that the machine is unlikely to become popular when it is placed in the market against such a well established machine as the Commodore 64. JH

Setting up

The Emerson comes in a rather large box containing everything you need to start you off except a TV and a cassette player. There were two bookslets and two manuals to contend with, but the Second Up guide seemed to be the logical place to start.

In fairly comprehensive and there was very little that we could find wrong with it. Carefully following the instructions the computer was connected up with no problems.

The Settting Up guide contains a description of the monitor and some very other diagrams which aren't really explained there, but it is very difficult to tell this stage what the information given is all about.

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the start of it's obvious.

The first program we tried out was a very short graphics program, taken from the manual. This worked perfectly fine first and we were able to add an extra line to produce a rather clever effect. The graphics contained a series of ever changing circles which apparently changed colour and the modifications taken from the manual caused the background to flash through the spectrum.

Once achieved the program modification was quite effective. For the manual presented some poor knowledge of colour which tends to confuse the absolute beginner. It advises the use of seven line 128. Presuming that line 128 should come between lines 130 and 140 we tried to position it above using the user key. We failed and only later discovered that it can be typed in the location of the cursor and is automatically inserted in the correct position by the computer.

Having got the first program up and running we moved on to the next listing in the book. This is described as a program which shows a multi-coloured forest with exploding fireworks. This listing unfortunately contained at least two errors: a mix colour instead of a colour and line 1000 numbered 100000. One of BBC's experts helped us sort the line problem and the expert resolved itself. However, the program just failed to run and gave out the message 'Unknown end of input' but nowhere in the manual could we find any explanation of this phenomena.

Another error message we received several times which became obvious at this stage was the fact that although the guide described the monitor connection had as a lead with four plugs at each end, it transpired that there were in fact five leads with two plugs at either end. GL

The manual

The programming guide is a 229 page guide to programming for the user and so much is full

but unfortunately the problems we encountered were largely out of our hands. When we managed to get programs to run they were quite cumbersome and uninteresting, but that was overlooked from a beginner's point of view, by the enormous difficulty of the machine to learn for the totally uninitiated. GL

Good points

The Emerson keyboard looks quite stylish it's grey, with numeric control keys around the traditional QWERTY keys. The function keys above the numbers and a real shift key, which, although highly useful, is unlikely to be pressed in reality.

It's attractive and compact looking. The joystick is built in to the bottom right hand corner, and has a green body. This seems very lively but doesn't seem to be affected by friction or movement.

It's a separate unit connected to the main board via a ribbon cable. The joystick is located in the left hand side, while there's room for expansion on the right hand, opposite, giving a nice symmetrical look. The whole of the machine looks as if it's been carefully designed for looks, with compactness and simplicity the key factors.

The one area of the machine however the ports for printer and tape reader, etc. The tape button is located at the far right hand side of the board, and it's easy to identify by touch alone.

From a南北試驗's point of view, the keyboard functions are sensible. Most of the commands are typical of computer use, but you can't see the control shift key, for example, if you just want to type in the usual upper case instead you must press CTRL and LOCK, both with your left hand fingers. This means that you don't press a key which is normally covered by the left hand in the same time, slowing you down.

The keys have a middle emphasis feel. They're neither mushy, nor are they inclined to finger snap. Not bad, like a typewriter keyboard, but possibly because was good, fast from here to type up even such didn't provide any depression, whereas on a

DEADERNDUSTERS BLOCKBUSTERS

Blockbusters has sold over 10 million copies, featuring over 100 games in its library, and it's always learning from its 1.5 million players.

Central TV's Blockbusters, which started in March 1987, now features 100 games in its library, and it's learning from its 1.5 million players as well. It adds games to its library at the request of its viewers. It's got the family, teenagers, and school kids tuning in to their favorite game show.

The two have got them into business, and now they're looking to expand their business model by adding more to their software line-up. It's a win-win situation for both sides.

If you've got a computer and you'd like to play the latest Central games, don't go to the store. If you want to buy them, just go to the Central website. It's available at www.macsen.com.

Just go online today, and we'll send you our excitement - with delivery within 3-5 days.

This is what the experts have to say:
A stupendously hot follow-up to the game with
its trademark infectious enthusiasm! —
CRAIG MCNAUL, MACCAFFIE

Macsen Software, GBA Limited, 17 Nott Square, Carmarthen, Dyfed, SA3 1PQ
Please send me a Blockbusters programme for my
 BBC-4 GAMESMASTER SPECTRUM 48K
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Price £7.95 + £1.00 p&p.
Enclosed Cheque/P.O. number _____
For £8.95 made out to Macsen Software or please enter
my ACCESS/BARCLAYCARD number _____
Signature (Mr/Mrs/Miss) _____
Address _____
Postcode _____



THE ULTIMATE CHALLENGE!



CENTRAL

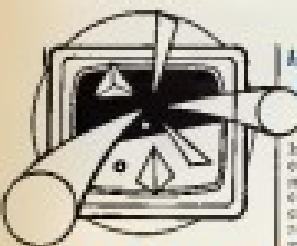
B

S

C

T

STATE OF THE ART GRAPHICS



In a new regular series, Jon Revol takes a closer look at utility packages

In today's cut-throat world of computer graphics, one of the major selling points of a home computer is its graphics capability. Does it have high resolution, fast drawing speed? How many colours does it have? How many of them can be displayed on the screen at one time? In the early days of the Petz and Tandy's these questions weren't even dreamt of. In those days graphics had to be built up from

scratch. What you can't do with the graphics on a BBC you can't write about. If you want to print them just because they're — one glaring omission from the practical memory of the BBC is its lack of a circle. In the example program PLOT.CIRCLE is called from line 30. The three numbers in the attached brackets are the X and Y co-ordinates and the radius of the circle. These are passed to the procedure at line 2000 and

using the command, PLOC(x,y,r)& you'll see circles. PLOC(x,y,r)& and PLOC(x,y,r)& are the co-ordinates of the centre of the circle and r& is the radius of the circle. One point to remember is that this procedure won't work if you aren't in a graphics mode e.g. QLDA or I.

The following procedure can be called from anywhere within one of your own programs without or after programming

17 PLOC

20 PLOC(x,y,r)& 300,200

30 END

2000 DEF PLOC(x,y,r)=PLOC(x,y,r)&

2010 VDU2&posX&posY&radius&

2020 HOME & redius&

2030 FOR circle = 0 TO 2 * PI STEP Pi/30

2040 DRAW radius + SIN(circle),radius + COS(circle)

2050 NEXT circle

2060 VDU2&0&y

2070 ENDPROC

Sold on, if you were lucky, shaded blocks which were positioned to the screen.

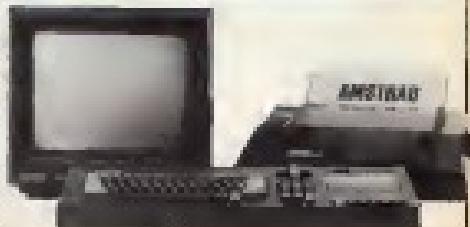
An we now have all this sophisticated kit at our disposal it would be nice to try and make full use of it. It is my aim, through this column, to demonstrate just the general, and maybe plain a few basic, applications for our more advanced readers.

Apart from producing graphics like last we will be taking a look at some of the utility packages, both software and hardware, which are aimed at making the computer system life that little bit easier.

Book hint

Most BBC and Electron owners will tell you there message has one of the best and most comprehensive BASICs on the

```
2010 LACOD,13 : REM Select register 13
2020 48000,40 : REM Send value to register
2030 48000,13 : REM Select register 13
2040 48000,0 : REM Send value to register
```



variables. The resultant code is shown in the middle of the screen and has a number of 400 graphics lines. An ideal way to run the above procedure is to use the "SPOOL" and "REDEC" method which is described on page 403 of the user guide.

GUT with Amstrad

The Amstrad's video display is under the control of a very clever chip, the 6864 video chip. Using the GUT command you can manipulate the screen display like a professional.

Registers D and E of the chip normally contain the values 40 and 0, respectively. By altering these values a seven step sequence can be formed in all four directions.

Watch the birdie!

New from Micro-Resources we have The Birdie Camera for the BBC. The device is a 7 x 5 cm black box, open which contains a tiny little Prismatic lens. The camera is connected to the BBC via a two-metre ribbon cable which plugs into the user port.

The Birdie is able to convert images into a form which can be displayed on your VIDEO by the computer. The software supplied allows the Birdie to be used in a variety of different ways. The first of these programs allows the on-screen display of any object viewed by the camera.

Unfortunately, the display is only half a colour depth. The image can be dumped to an Epson printer at any time by pressing the COPY key, but obviously the image buffer will never result can be obtained by using the program and selecting the screen dump cell with a cell in a Computer Concepts Printmaster keyboard.

As with many peripherals, they need to fall with the standard of the software supplied. With this type of device one would expect to be able to save screens to disk or tape for printing at a later date. No such routine is provided in any of the programs that may be supplied by the user. The most impressive of the range of programs supplied produces excellent full screen images in eight shades of grey.

Despite its limitations the Birdie is a cost of £115.

By using a series of loops and

```

10 FOR N = 1 TO 40
20 PRINT "40"; Thens; 11
30 NEXT N
40 OUT 48000,13
50 FOR N = 1 TO 40
60 OUT 48000,N
70 FOR Z = L TO 100 : NEXT Z : REM baby loop
80 NEXT N
90 OUT 480,13
100 OUT 48000,1 : END REM register 0 = 1111111111111111

```



A Revolution in Computer Imagination



CONTROVERSY

SHORT BUT SWEET

**This brief utility
may come in
really handy.
It's a very basic
word processor
by J S Robinson**

- How it works
- open file name edit
- input A1
- open A1
- A1 = 1
- Ctrl + C

POKE 101 turns off the "P" prompt on the upper Amiga screen.
POKE 110 turns immediately off sound on upper Amiga screen.
POKE 1100 gives character selection.
POKE 1101 gives character selection.

There's a short utility which lists a primitive word processor like it is prime double brackets, period, inverse slashes and brace to double.

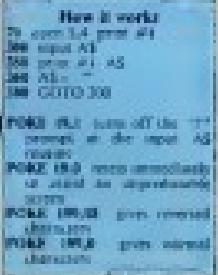
Here are some points to note:
When you choose the type to be printed, only simple lettering (those indicated as reverse or in reverse) are accepted. The letters are then combined with the word *in full*.

The beginning here with a magnifying

at spaces, use a shifted space. Putting return on it's own produces a blank line. You can't use carriage — these must be enclosed from the start.

The maximum number of characters (including spaces) per line is 79.

To change the type, press left arrow followed by return and it and all output type strings followed by return.



Ever felt so frustrated by typing in your own programs that you'd prefer to be banging your head against a proverbial brick wall?

Iain Murray shows you how to stop ripping your hair out.

STOP THE BRICK WALL SYNDROME

If you've tried to do a lot of home programming on the Commodore 64, here are some general and specific hints.

Firstly, learning to type correctly is a great help in trying to information quickly and accurately. This involves using control fingers for control keys — unless there are two fingers over the whole keyboard, no matter how big they are! Most specialist books will help here, and a number of typing tests which run on the computer are available.

If you are getting a few more programs, it is vital to have them written down beforehand. If you just sit down and start typing, your program will almost certainly be unnecessarily complex, and you will probably get lost and waste a lot of time — or worse still, give up. Also, if you plenty of ROM magazines and your program, make you easily remember what each bit of code does while developing it, so if you come back to it in the future. The ROMs can be removed once the program is complete.

The early BASIC does not provide for automatic line numbering or block defining features, but POKE-NEXT loops can come in very useful. For instance type: `POKE POKE 1+10 TO 100 STOF 100 PRINT 1 NEXT [RETURN] (HOME) [CLEAR DOWN]` (words in brackets bracket refer to single key entries).

This will give you a set of line numbers down the screen with the cursor on the first one. Repetition pressing of [Return] will delete those lines from memory, so you can move the cursor just the number, ready to type in a line of BASIC code. Pressing [Return] will then enter that line and put the

cursor on the next line number.

Once all the numbers have been used, press [Home] and enter the POKE-NEXT command to give you the next few numbers. With a little practice, this can save a lot of time. Another useful tip is that if you have two lines that have, or very similar, their type one, enter it and then use the line number to give you the next one, and repeat. Only one line is on the screen, but if you LIST the program, you will see the two lines.

The maximum line length on the 64 is two bytes from long DATA commands, and if you type anything more than this it won't be accepted when you enter the line, which is rather annoying. Fortunately, Commodore has included a "shortline" command which lets you shorten. Most keywords have an alternative, usually the first letter followed by a shifted second letter (e.g. `PRINT` is a "shorted" U) or `CLS`, though `PRINT` is a notable exception at present.

The program is ended with the keywords in the relevant form to save memory, but they are expanded automatically when the program is LISTED. Hence when a line is fully expanded, it may be more than the allotted 80 characters long. This is fine if you don't exceed the line, and if you do, the keywords may need to be re-entered to make the line less than 80 characters long before you press [Return]. This can be very frustrating and takes a lot of getting used to. A good way of getting used to it is to avoid deleting back from the bottom line of the screen to the second bottom line, as very occasionally this results in the computer "locking up" and your program will be lost.)

One very handy utility to have is a toolbar with functions

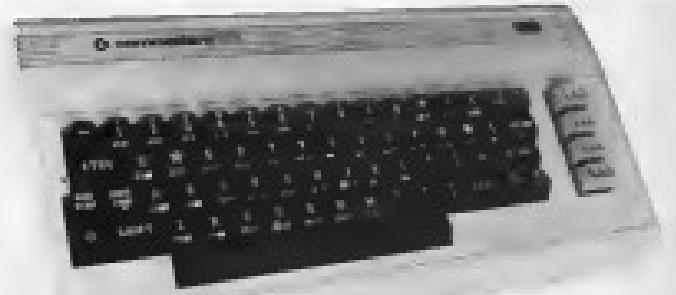
key defining, a number of which have been provided. A glance through the program you're typing will show you the most common words and character groups in it. These can then be defined on to the computer's function keys using the toolbar, and as you type the program, pressing the appropriate function key will print the full word or expression on the screen instantly.

When typing in programs, remember to `SAYAVE` your programs regularly as you type, and also while debugging the finished program, because if you've made a mistake, the computer may crash and your program will be lost. Also, whenever you version of the program, make sure that you have the most up-to-date one.

When typing in DATA, remember, commas can be missed out (e.g. `DATA 1,2,3,4,5,6,7,8,9,10` can be written as `DATA 2,3,4,5,6,7,8,9,10`). When all data has been entered, `SAVE` and `RUN` the program. If all is well there are no checksum errors, delete the last data entry, delete the last data entry and run `LIST` — you should now see an `INPUT` or `DATA` ERROR message, which tells you that you have the correct number of data items parameter to put the last item in). Having a checksum is a adding all your DATA bytes together and comparing with a pre-calculated total is a relatively haphazard way of checking that the values you data are correct.

It is also useful with pressed `Intervis 10` compare the difference in line lengths between your source and the printed page (say if line 100 is 20 characters longer than line 99 on the screen, but the difference is four characters worths on the page, then you may have made a mistake).

These simple tips should help you enter programs into your machine more quickly and accurately, so get coding!



If you're serious about writing programs on the Commodore 64, here are some general and specific hints.

Firstly, learning to type correctly is a great help in trying to information quickly and accurately. This involves using control fingers for control keys — unless there are two fingers over the whole keyboard, no matter how big they are! Most specialist books will help here, and a number of typing tests which run on the computer are available.

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VIC victory

May I first congratulate you on a great magazine. Unfortunately I have just discovered it, and I feel a bit late about writing the first 20, but I have now ordered a set and I will definitely not miss any more.

However, I feel I should write on one very major of VIC 20's bad points with the program on page 10 of issue 20. The problem is that '100' responds to joystick down. All the right stuff worked. Only in the wrong order. It should read:

```
100 IF X = 100 + C OR
100 X = 20 = 2
100 THEN RETURN
```

I can assure other VIC-20 owners that it's worth trying in the program. The point is a good combination of threads and back. Well done, Gary Todd

Andrew Scott, Middlewich

P.S. Are back issues available?

Mr. Scott's answer can be obtained from **Software 100**, P.O. Box 1100, 179 Markeaton Street, Nottingham, NG1 1BB, Notts.

Good point

I was object to Alan Souter's letter in H.W. #1. All 100+ points have their advantages and disadvantages. It's not fair to say one is better than the other. The VIC-20 has good graphics and keyboard, while the BBC has good sound and monitor, and the Spectrum has excellent software support.

Marcus Knight, W. Sussex

Trix break

I dare say you all know of lessons from Buffet would be very like me. I've seen Trix 12 myself and it's quite beat my theory.

Anyway, after spending much time looking around my Holiday Inn in Bremen — at British, French, German, Portuguese and know how and how much and so on.

Still, I had my eye cast on this book, although I had to wait nearly three weeks to get it (unfortunately late home).

Fairly basic, only the obvious and as far as the big moment 100% and what. A decent full of diagrams which took up a couple lines in the original!

Now, I fully endorse it and

so on, but I did find a rather basic mistake in making out the system in your CAD program. Money. Money in H.W. #1. Whether the BBC program was both clear and easy to read, but of course in my.

Would it not be possible to add your programs to use the Headquarters generator and use the German block?

I did find power may reduce half of Japanese to help and a better model showing it is more precise like the BBC, the job is good. Can all the software programs be as good as they are made out to be?

C. Danner, SAP Landshut, Germany

Disgusted!

Having just read the letter posted by Alan and Graham from Mr. E. P. Patterson (H.W. #1), I was disgusted. I long for CPC and look forward to Tuesday when I can open the paper to find a CPC program. Also, there is no answer to that.

However, I am not on the opposition side. I have no views either and remain. If the only reason, as I should say, the main reason Mr. P buys H.W. is for the programs for the Commodore compatibility. Spectrum, then he should just send, buy a spectrum CPC magazine as well.

Otherwise he shouldn't get away if there isn't a program for CPC. Patterson, take my advice and stop reading H.W. and stop buying CPC magazine as well.

Otherwise he shouldn't get away if there isn't a program for CPC. Patterson, take my advice and stop reading H.W. and stop buying CPC magazine as well.

Paul Oliver, Keynsham, Somerset

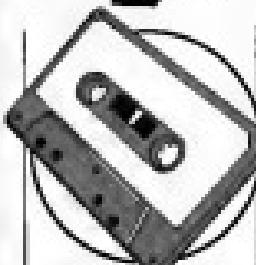
With thanks from the many dedicated subscribers, Graham and Tim.

I also want to give a vote of thanks to British Telecom for PostNet Software. I bought it — it's brilliant. The graphics are great and the sound is superb.

Kevin Ringrose, Bristol

TOP 20

Compiled by
Gallup



Up and Coming

This new column adds our regular look at the changes in the chart, particularly those progresses in the lower reaches of the top 20.

All changes this week, with Alan R racing straight to number one. It seems the microbial beast has come to maturity. You wait 10 weeks in the chart, Gabe's software has lost the number one slot. Read a review of this week's number one game elsewhere in the issue.

There's less of activity on the pre-machine chart too. Five releases on the Commodore top 10 suggest a new winter could bring it's way out of the crowd.

The BBC chart shows a number of changes too, but Curtis Queen hasn't managed to push Eric's logo top position. Both Spectrum Egg, were to have a sequel, and 10 Grand Prix, remain after a break of some weeks.

Raid over Moscow has made a big jump in the Spectrum chart, but not without opposition. UK Candi's underground was pushed last week by CND protesters who felt the game encouraged violent methods.

Barney parades in the lower 20 more easily by Curtis Queen, which managed to climb to at number 18, closely followed by Diamond's Man OFFice at 17. This is quite an achievement for a program designed for magazine use. It's the only utility program in the entire top 20 this week.

Another first is the entry of a Commodore 64 program. Kalle's Egg, stalled at 16, number 47. The recent change in price could make it a real star of the future.

SOFTWARE

Week Ending February 19, 1985

Rank	Title	Programmer	Platform
1	Alan R	Unknown	+
2	Breakthrough	Amstrad	+
3	Raid over Moscow	UK-Spectrum	+
4	Impossible Mission	C64	+
5	Eric Thompson's Decathlon	Spectrum	+
6	Berry	Revised	+
7	Hunchback	Spectrum	+
8	Zaxxon	MSX	+
9	Football Manager	Amstrad	+
10	Metal Day	Spectrum	+
11	Double Loco	Sierra	+
12	Egg	Amstrad	+
13	Technozone Test	Amstrad	+
14	3D Breakout	Amstrad	+
15	Eric Bell Rally	Software Projects	+
16	Almond	MSX	+
17	Money in Insurance	Granada Graphics	+
18	Flight Path 201	Amstrad	+
19	Hunchback II	Spectrum	+
20	Matrix Miner	Software Projects	+

SPECTRUM		BBC		COMMODORE	
Top 10	Top 10	Top 10	Top 10	Top 10	Top 10
1	Alan R	1	Eric Bell	1	Impossible Mission
2	Breakthrough	2	Breakthrough	2	Breakthrough
3	Raid over Moscow	3	Man OFFice	3	Eric Bell's Decathlon
4	Eric Bell Rally	4	Double Loco	4	Eric Bell's Rally
5	Spectrum Egg	5	Flight Path	5	Flight Path
6	Almond	6	3D Breakout	6	3D Breakout
7	Barney	7	Eric Bell's Decathlon	7	Eric Bell's Decathlon
8	Money in Insurance	8	Flight Path 201	8	Flight Path 201
9	Flight Path 201	9	Almond	9	Almond
10	Hunchback	10	Barney	10	Barney

John Brown
writer, New York



**Brian McNamee, owner
with Foster Fund**



Revolutions
in science
today

Name	Game	Machine	Score
Jon Chisholm	Falcon Patrol	C64	4002
John Dawson	Colt Express	BBC	19,700
Mike			
Mark Forest	Tombstone Gun	TI-99/4A	204,190
Paul Holmes	Body Acid Jump Chali	BBC	20,000
Adam Kersani	TI Invaders	TI-99/4A	12,400
Phil Krasiloff	Carry On Pigg		270,125
Steve Rodgers	Star Trek Transporter Death	C64	18,138
Richard Speed	Presto!	TI-99/4A	20,000
Vincent Wrightson	Space Invader Party	TI-99/4A	20,000

Send us your feedback via HCAW. If you include a photo, we'll try to feature that, too.

Open and best

[View the complete news release](#)

Answers

What do you get if you make a copy of *Charles East*?
www.english-test.net

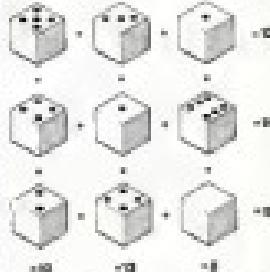
Wacky American tourist Japan. Bloody, I wanna buy a gun
like British computer...
American Electric?
Wacky American tourist Hell, no, I voted Democrat!
no offense though!

Sent to you via Mr. J. Goldin, 10 Grafton Square, London.

Powered by **Toshiba**

How many spots should you be able to see on the blank die face? Each row has five faces, so what's the marking on the bottom die?

Answers and explanations start on page 202.



READERS PAGE

A L I E N



In space no one can hear you scream.



SIGOURNEY
WEAVER
as Ripley
and
Intelligent Extraterrestrial



HARRY DEAN
STANTON
as Parker
the
Guru



DONALD
SUTHERLAND
as Dr. Harry S.
Giger
the
Designer



VERONICA
CARTWRIGHT
as Newt
the
Caretaker



YAPHET
KOTTO
as Parker
the
Guru



JENETTE
GOLDSTEIN
as Ellen
Ripley
the
Commander

THE CREW
Personnel
titles follow
yours to
command -
well almost

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The MSX Micro that's paid

Barney introduced originally the most successful range of electronic musical instruments in the recent past now CDM Music Electronics is introducing...

The DMS1 is a fully digital MSX music computer running the existing programs of its well known analogical series of Gitarmania guitars. Furthermore, complete new programs such as piano, guitar, flute, drums, organ, etc.

all that and more...

inside the DMS1 is a highly complex integrated circuit synthesizer that can be programmed to generate sounds from the industry standard ADPCM waveform library of over 1000 individual sounds.

For example you can play IBM sound wave instruments like the Roland JX-3P with three voices, or an acoustic guitar, electric guitar, electric bass, plus the 128 voices of drums and electronic sounds. Plus the 128 voices of bass, piano, organ, keyboard sounds by means of the built-in 16 voices of MSX system. All the MSX system programs will run without modification.

Furthermore, the system will interface with the Roland MC-30 sequencer, for instance to play a sequence of 16 bits in your sequencer. Furthermore you can connect the DMS1 to the Yamaha QY1000. You have the ability to play sequencer patterns and edit sequences using notes and Clock pulses.

Or try the MSX keyboard sequencer program which can control up to 16 voices of your DMS1. Or simply let the sequencer play a sequence of 16 bits in your sequencer.

Or, if you prefer you can use your own sequencer to control the DMS1. All you need to do is to connect your sequencer to the DMS1 and you can have complete control of the DMS1 via your sequencer. And you can also connect the DMS1 to a printer to print out the 16 bit waveforms.



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Features ■ ■

- KEYBOARD OR JOYSTICK CONTROL
- REALISTIC MILITARY CONTROLS
- 3D SCROLLING SCREEN
- UNLIMITED MISSILES & FUEL SUPPLY
- RADAR SCREEN
- DAMAGE REPORTS & BOMB LOAD REPORTS

Plus ENEMY BATTLESHIP STATUS REPORTS & BOMBER ATTACK WARNINGS



The Bungeling Empire is set to destroy civilization as we know it.

intra

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